

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Baltimore, et al.

Serial No: To be assigned

Filed: January 4, 2002

For: Nuclear Factors Associated with
Transcriptional Regulation

Attorney Docket No. APBI-P04-035

Art Unit: To be assigned

Examiner: To be assigned

Assistant Commissioner for Patents
U.S. Patent and Trademark Office
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Please enter the following amendment:

In the specification:

Please replace the only complete paragraph under the heading Related Applications on page 1 with the following text:

This application is a continuation of Serial No. 08/464,364, filed June 5, 1995, which is a divisional of Serial No. 08/418,266, filed April 6, 1995, which is a continuation of 07/791,898, filed November 13, 1991, which is a continuation-in-part of application of Serial No. 06/946,365 (WHI86-10), filed December 24, 1986, and of Serial No. 07/318,901 (WHI87-11A), filed March 3, 1989, and of Serial No. 07/162,680 (WHI87-11), filed March 1, 1988, and of Serial No. 07/341,436 (WHI89-02) filed April 21, 1989, and of Serial No. 06/817/441 (MIT-4167), filed January 9, 1986, and of Serial No. 07/155,207 (MIT-4167A), filed February 12, 1988, and of Serial No. 07/280,173 (MIT-4167AA), filed December 5, 1988. The contents of the ten referenced applications are incorporated herein by reference.

The replacement paragraph presented above incorporates changes as indicated by the marked-up version below.

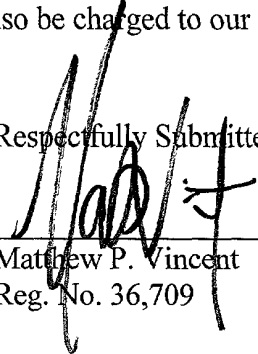
This application is a continuation of Serial No. 08/464,364, filed June 5, 1995, which is a divisional of Serial No. 08/418,266, filed April 6, 1995, which is a continuation of 07/791,898, filed November 13, 1991, which is a continuation-in-part of application of Serial No. 06/946,365 (WHI86-10), filed December 24, 1986; and of Serial No. 07/318,901 (WHI87-11A), filed March 3, 1989; and of Serial No. 07/162,680 (WHI87-11), filed March 1, 1988; and of Serial No. 07/341,436 (WHI89-02) filed April 21, 1989; and of Serial No. 06/817/441 (MIT-4167), filed January 9, 1986; and of Serial No. 07/155,207 (MIT-4167A), filed February 12, 1988, and of Serial No. 07/280,173 (MIT-4167AA), filed December 5, 1988. The contents of the ~~seven~~ten referenced applications are incorporated herein by reference.

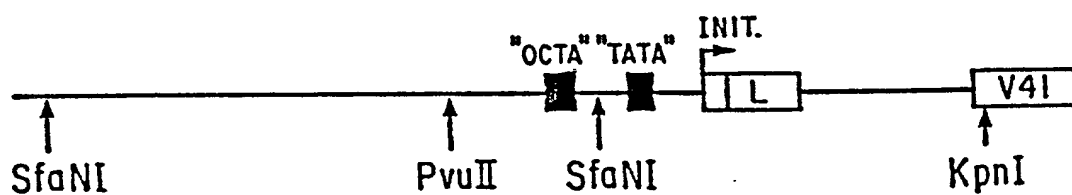
Although Applicant believes no fees are needed in connection with filing this Preliminary Amendment, should fees be due in connection with the filing of this Amendment, please charge the fees to our **Deposit Account No. 18-1945**. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit account.

Date: January 4, 2002

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Respectfully Submitted,


Matthew P. Vincent
Reg. No. 36,709



MOPC-4I κ CHAIN GENE

FIG.1A

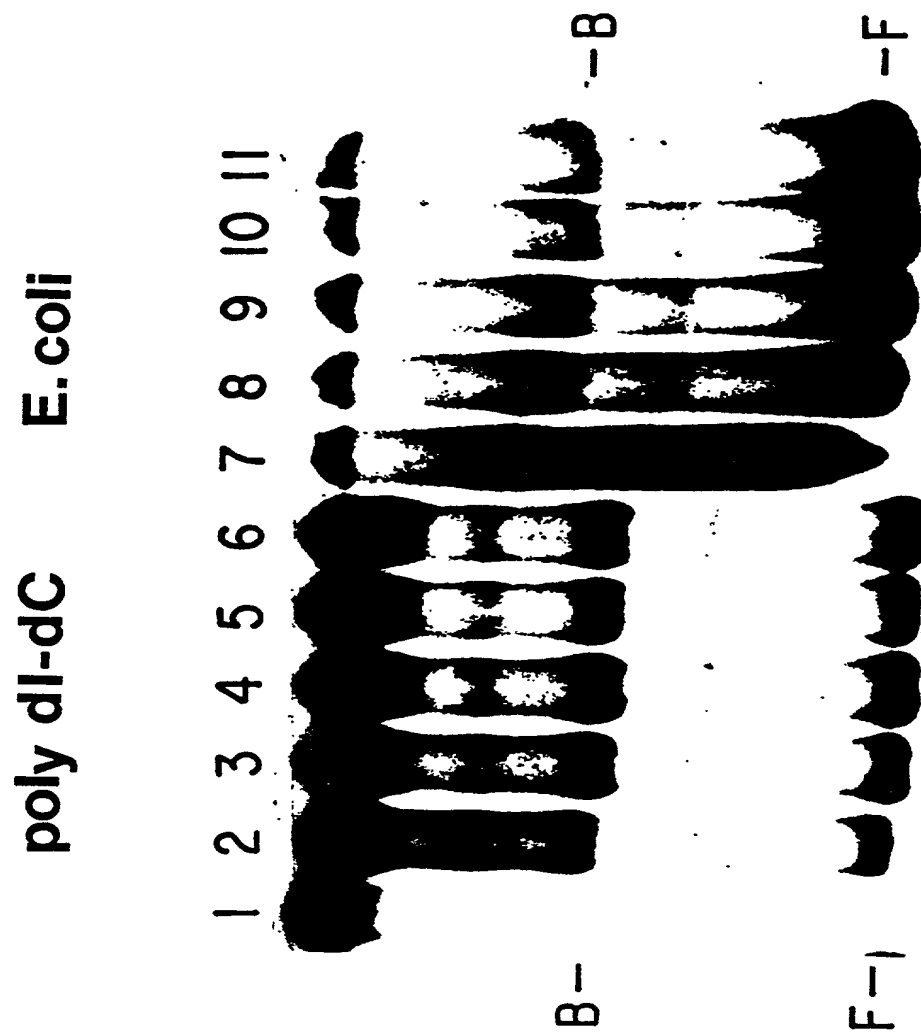


FIG.1B



FIG.1C

10037415.040403

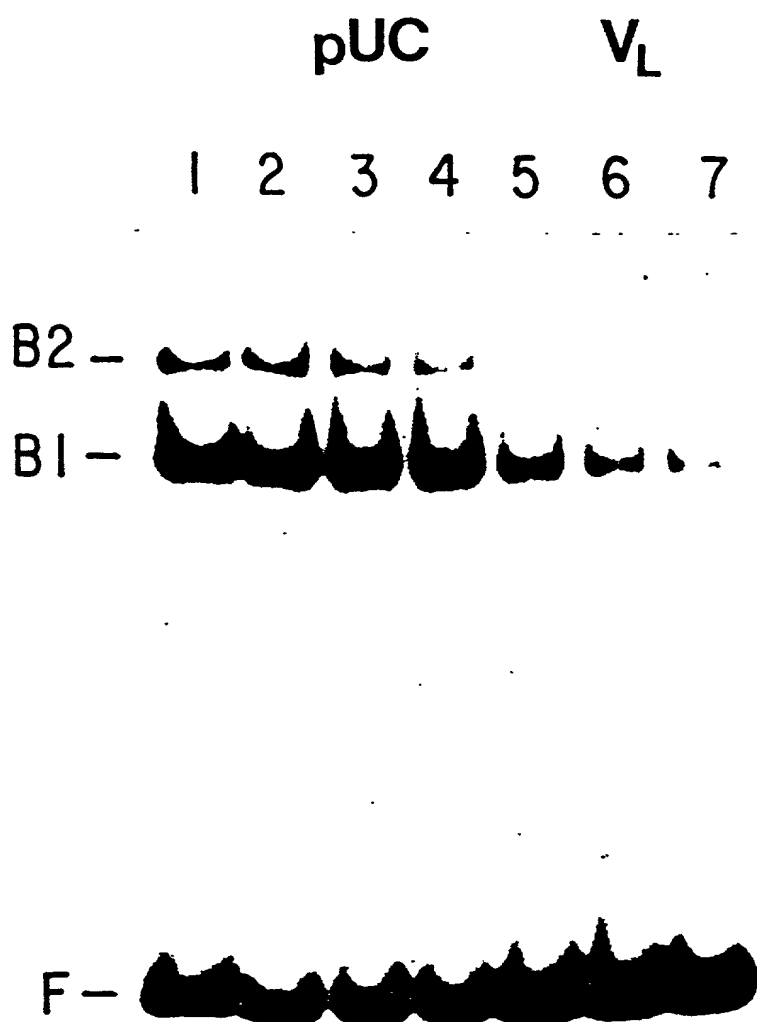


FIG.2A

FIG.2B

1 2



HeLa

1003745-010403

FIG.3



V_L coding strand (-66)	[*] TCTTAATA	ATTTCAT	ACCCTC [*] CAC
V_H non-coding strand (-50)	CGCACATG	ATTTCAT	ACTCATGA
$J_H - C\mu$ coding strand (166)	CCTGGGTA	ATTTCAT	TTCTAAAA

FIG.4A

V_L V_H J_H-C_H

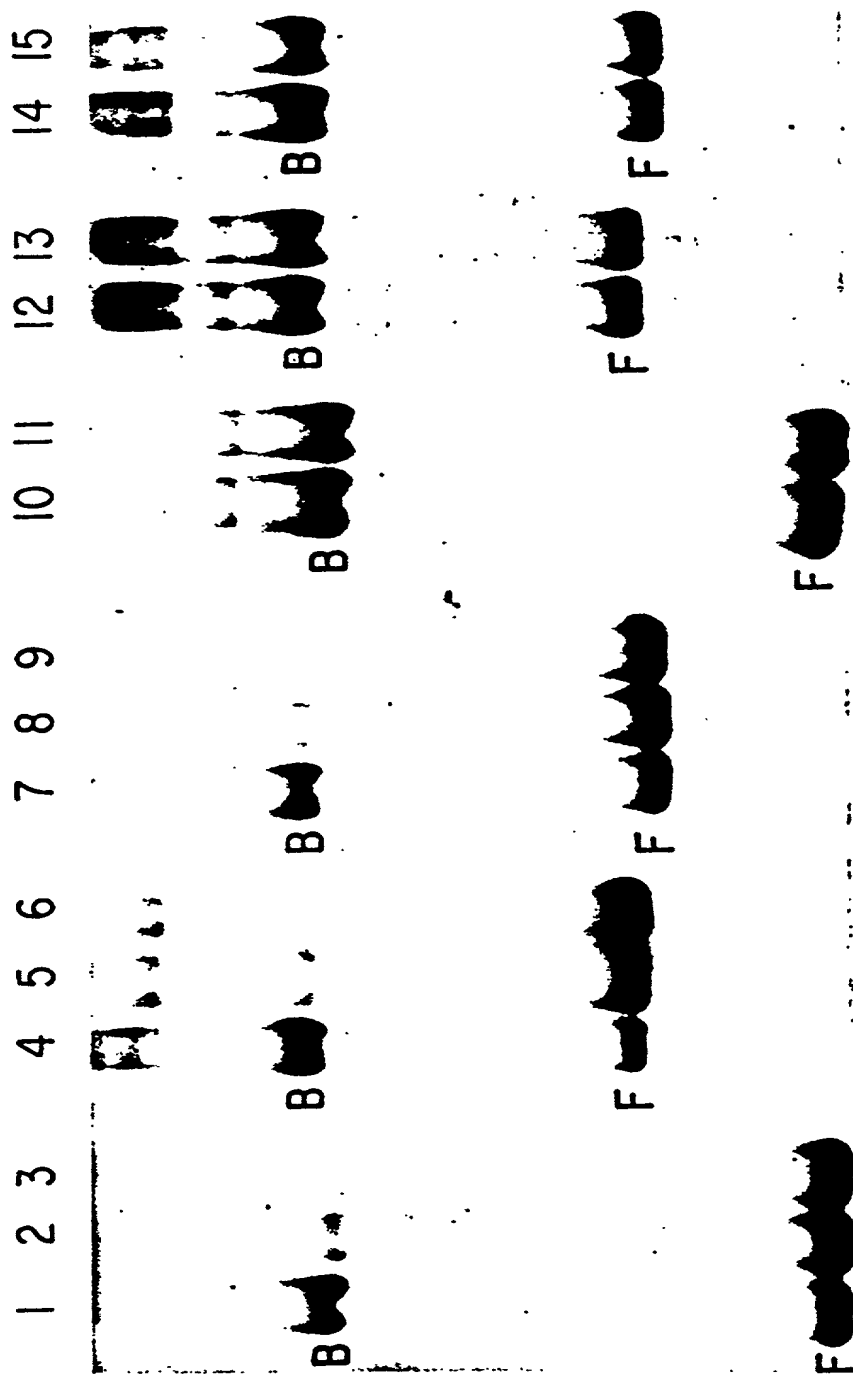


FIG.4B

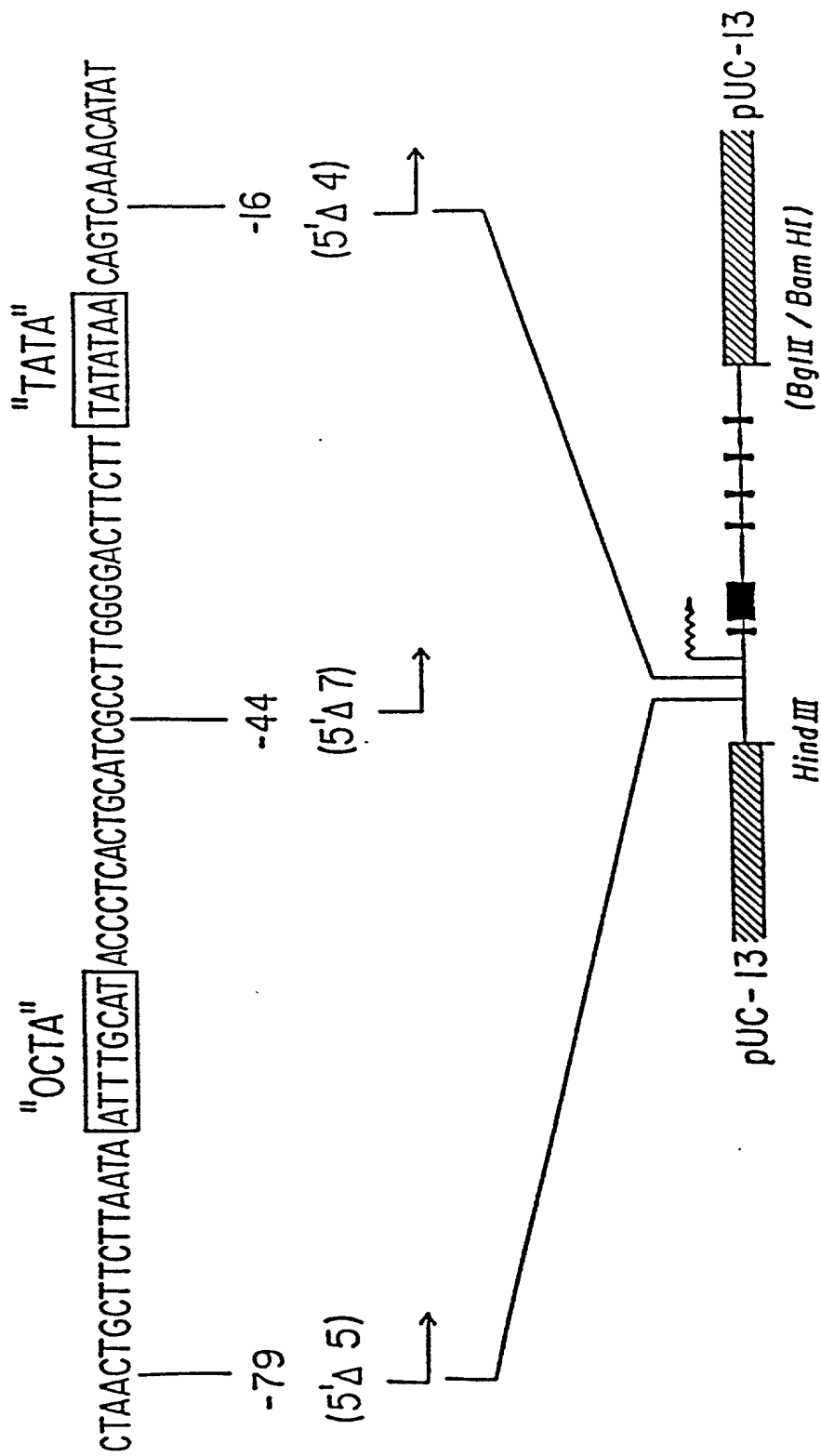


FIG.5A

FIG.5B

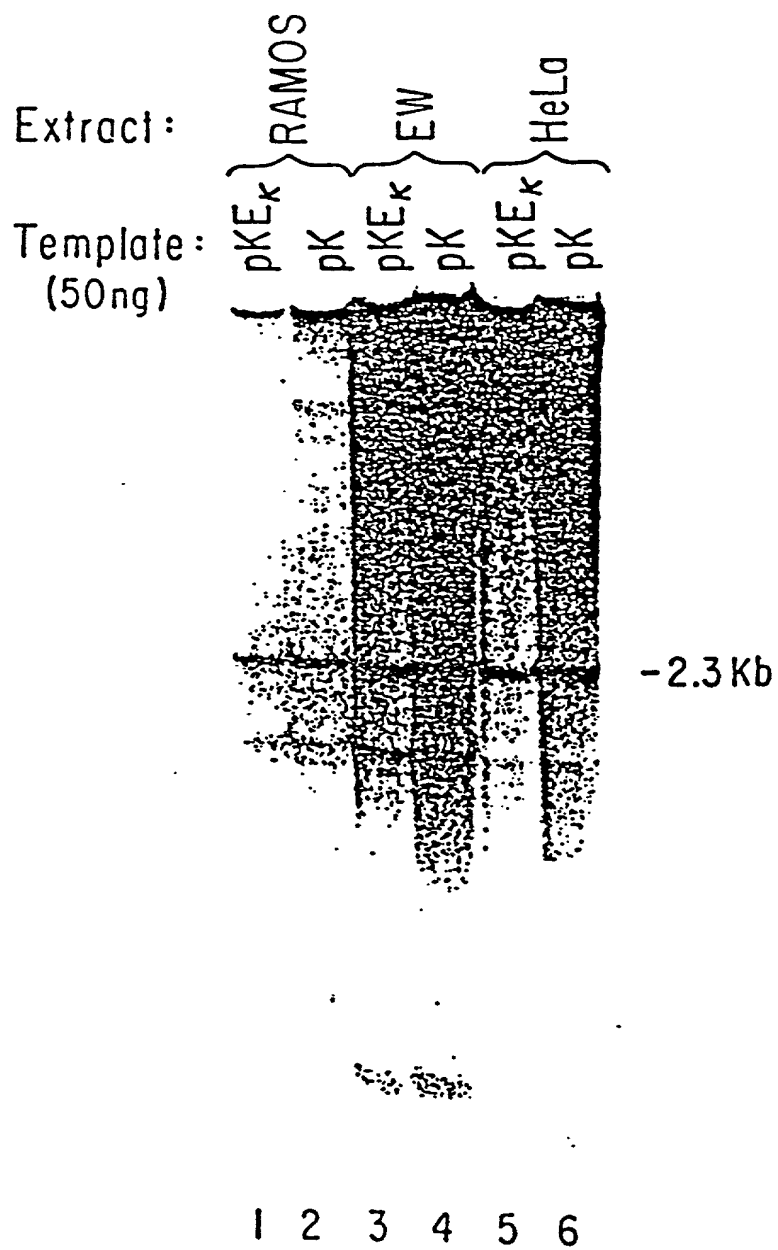
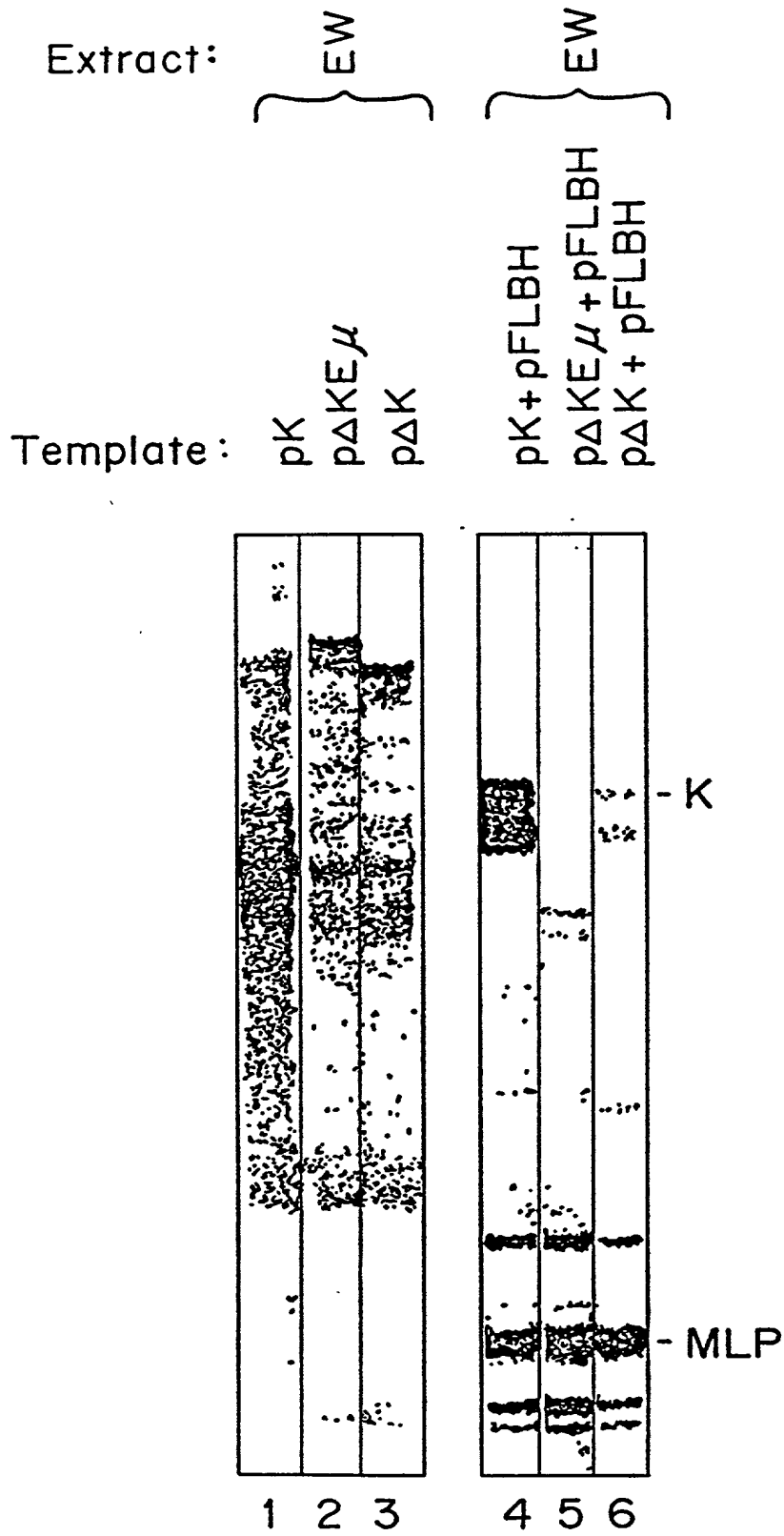


FIG.6



IgNF-A →
IgNF-B →

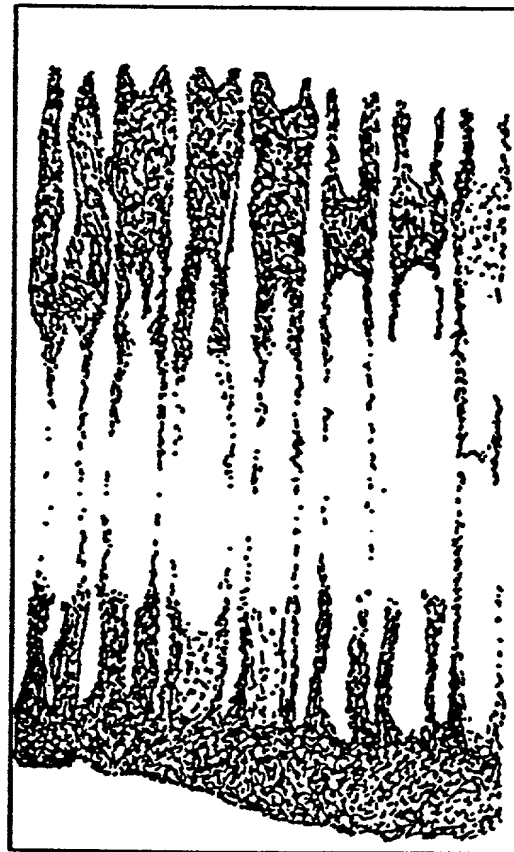


FIG.7

WEHI 231
AJ9
EW
PD
38B9
70Z
SPZ/O

B cell
pre B cell
myeloma

IgNF- A →
IgNF- B →

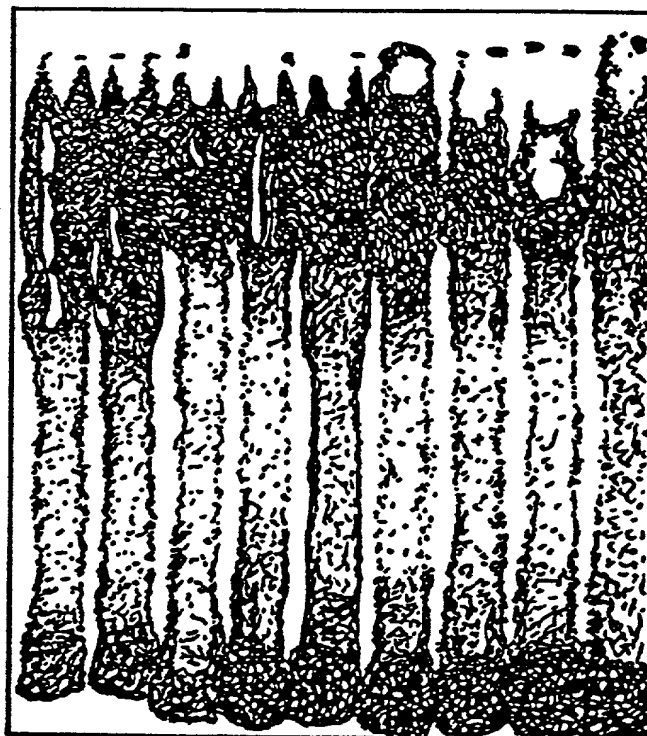


FIG.8

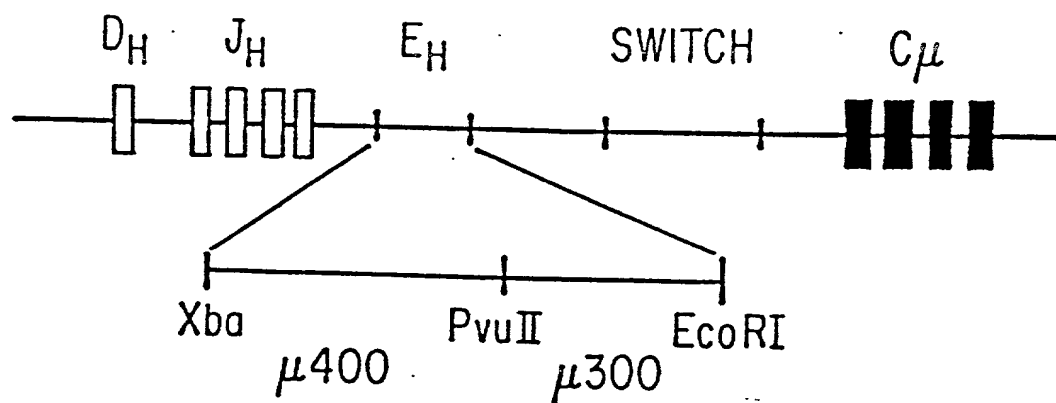


FIG.9A

Probe: $\mu 300$
 Extract: EW/N
 Competitor:

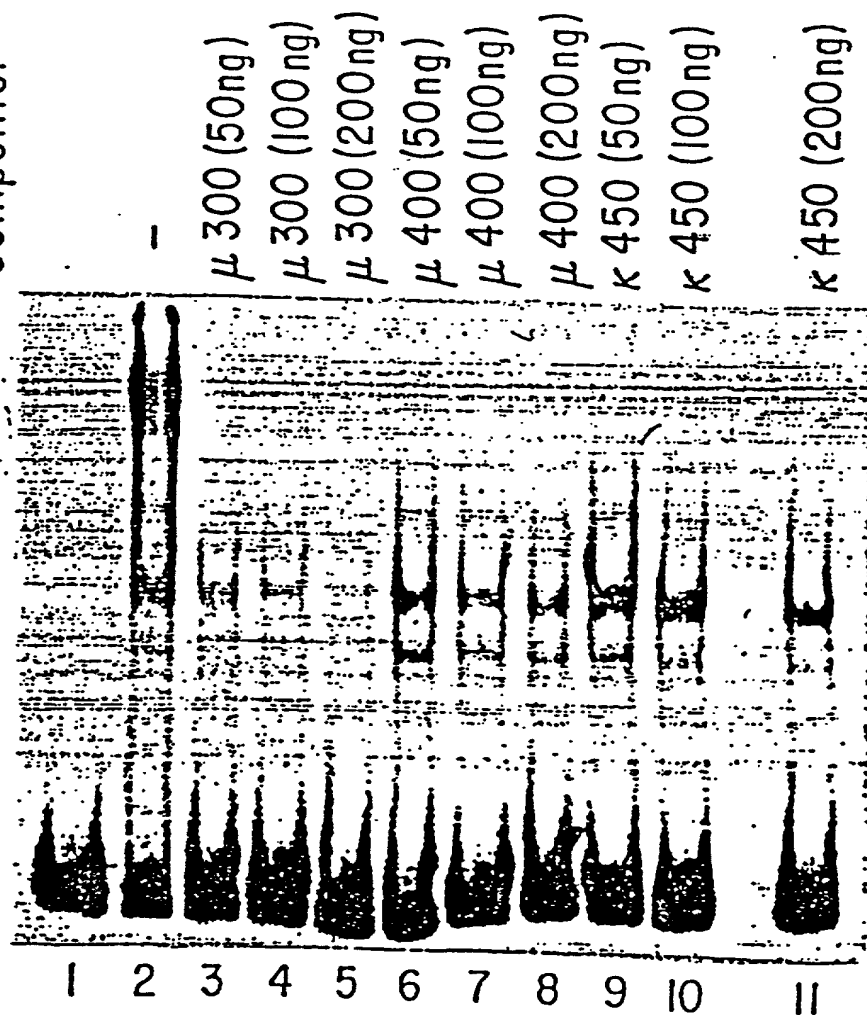


FIG.9B

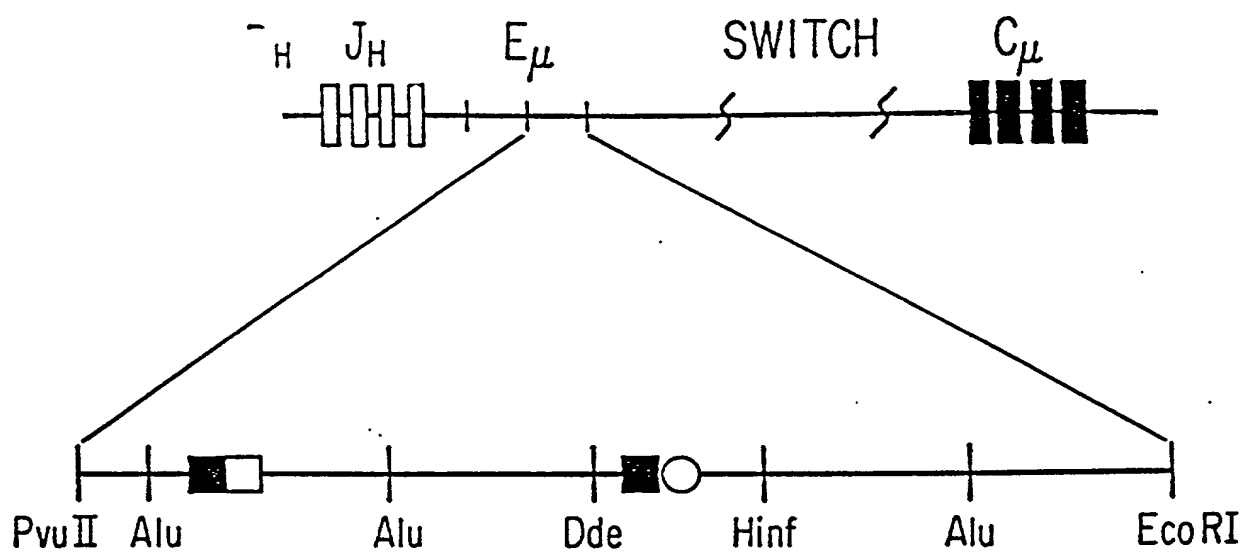


FIG.10A

\blacksquare : E

\square : ?

\bigcirc : Octamer (ATTGTCAT)

FIG.10B

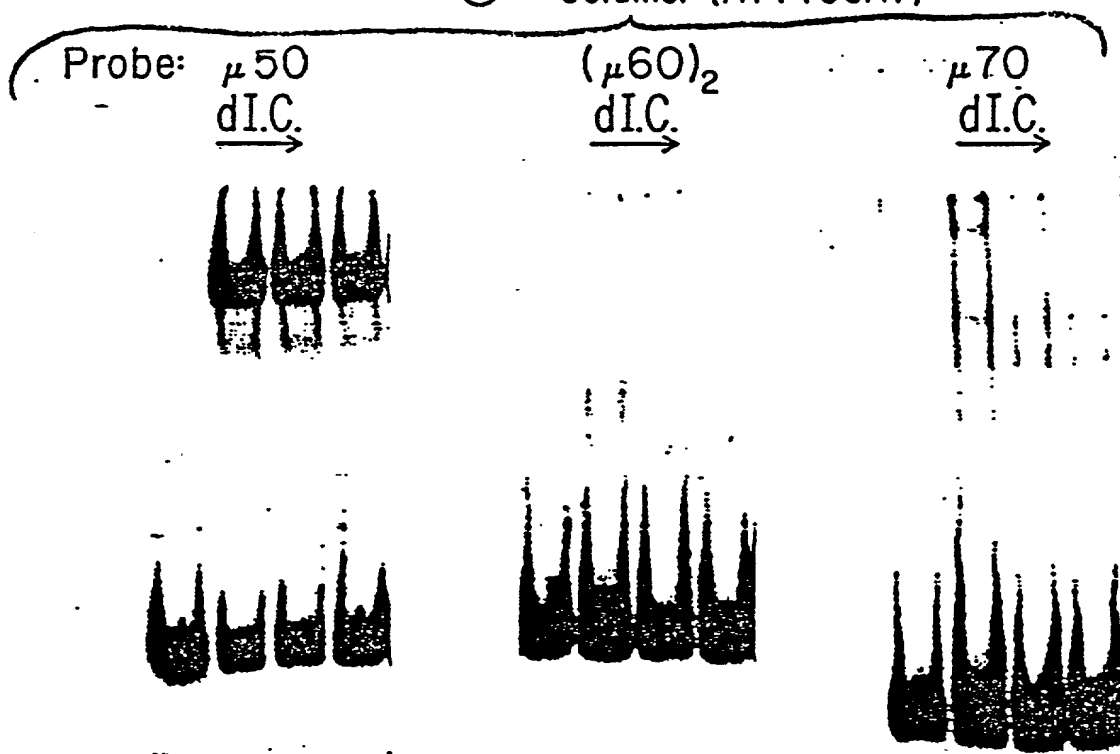
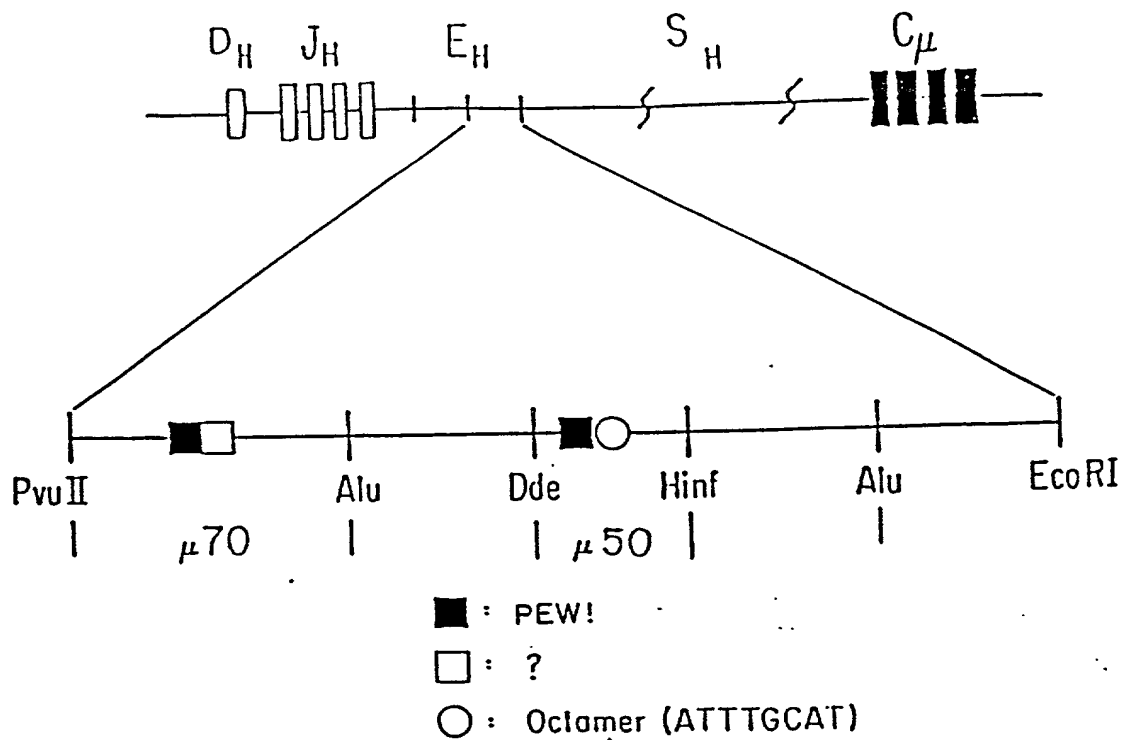


FIG.10C



LABEL: $\mu 70$
 COMPETITOR:

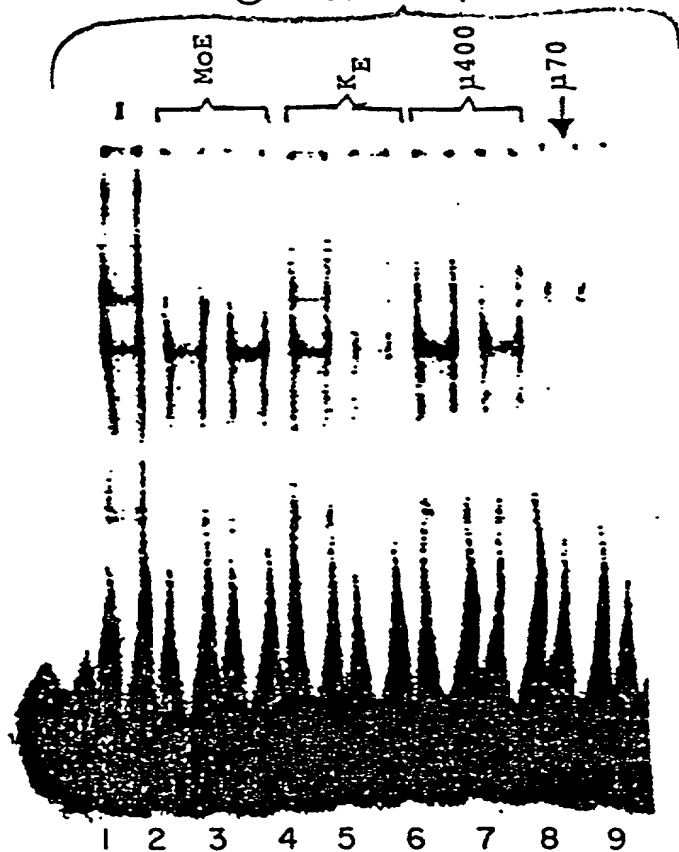
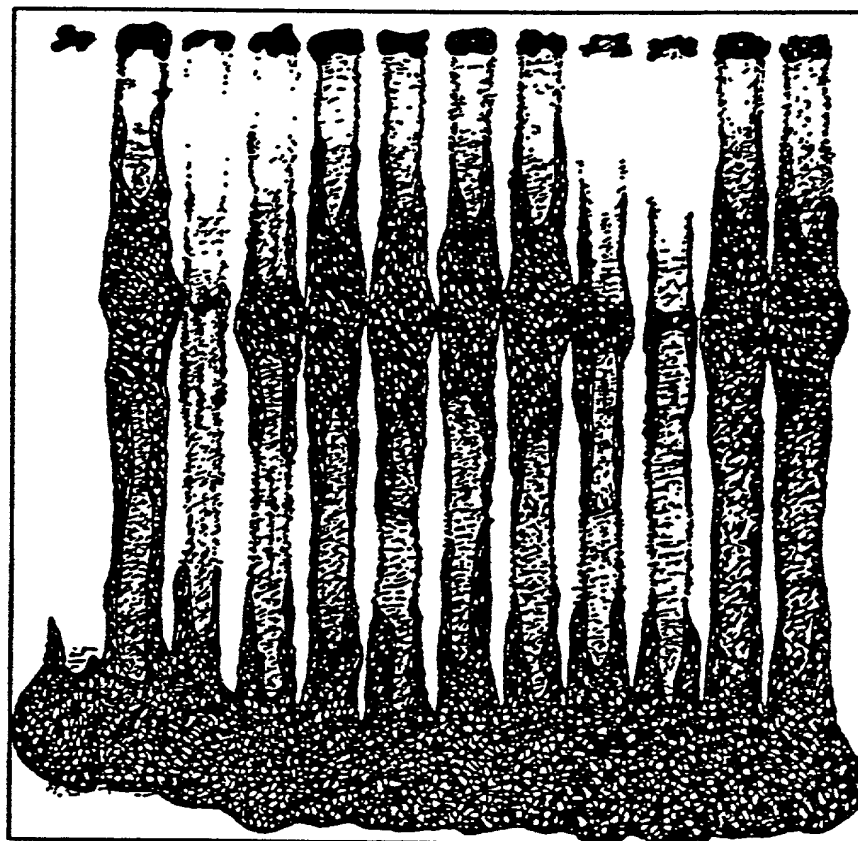


FIG.10D

FIG.10E

Probe: $\mu 70$
 Extract: EW (C)
 Competitor

-
-
$\mu 300$ (50 ng)
$\mu 400$ (50 ng)
$\mu 50$ (10 ng)
$\mu 50$ (30 ng)
$\mu 60$ (10 ng)
$\mu 60$ (30 ng)
$\mu 70$ (10 ng)
$\mu 70$ (30 ng)
$\mu 170$ (20 ng)
$\mu 170$ (60 ng)



1 2 3 4 5 6 7 8 9 10 11 12

FIG.IIA

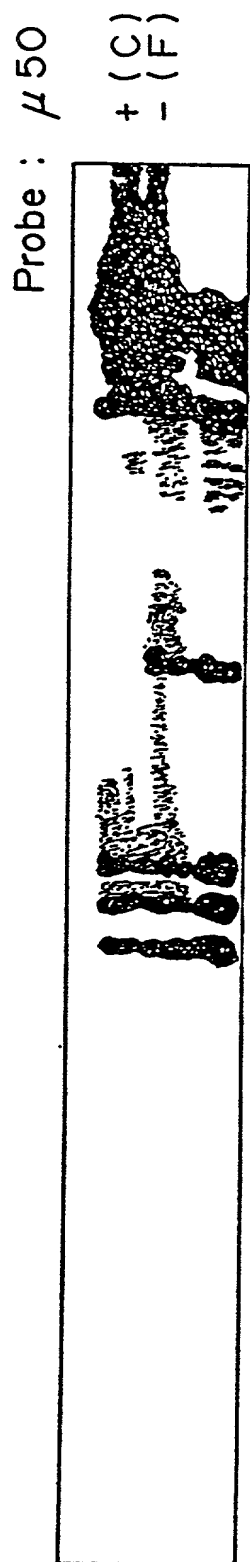
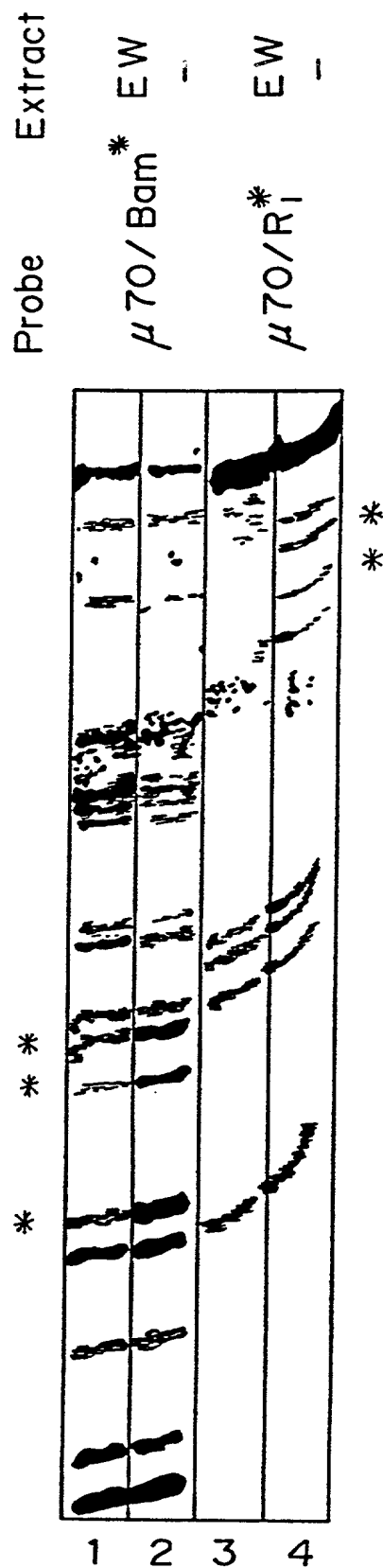


FIG.IIB



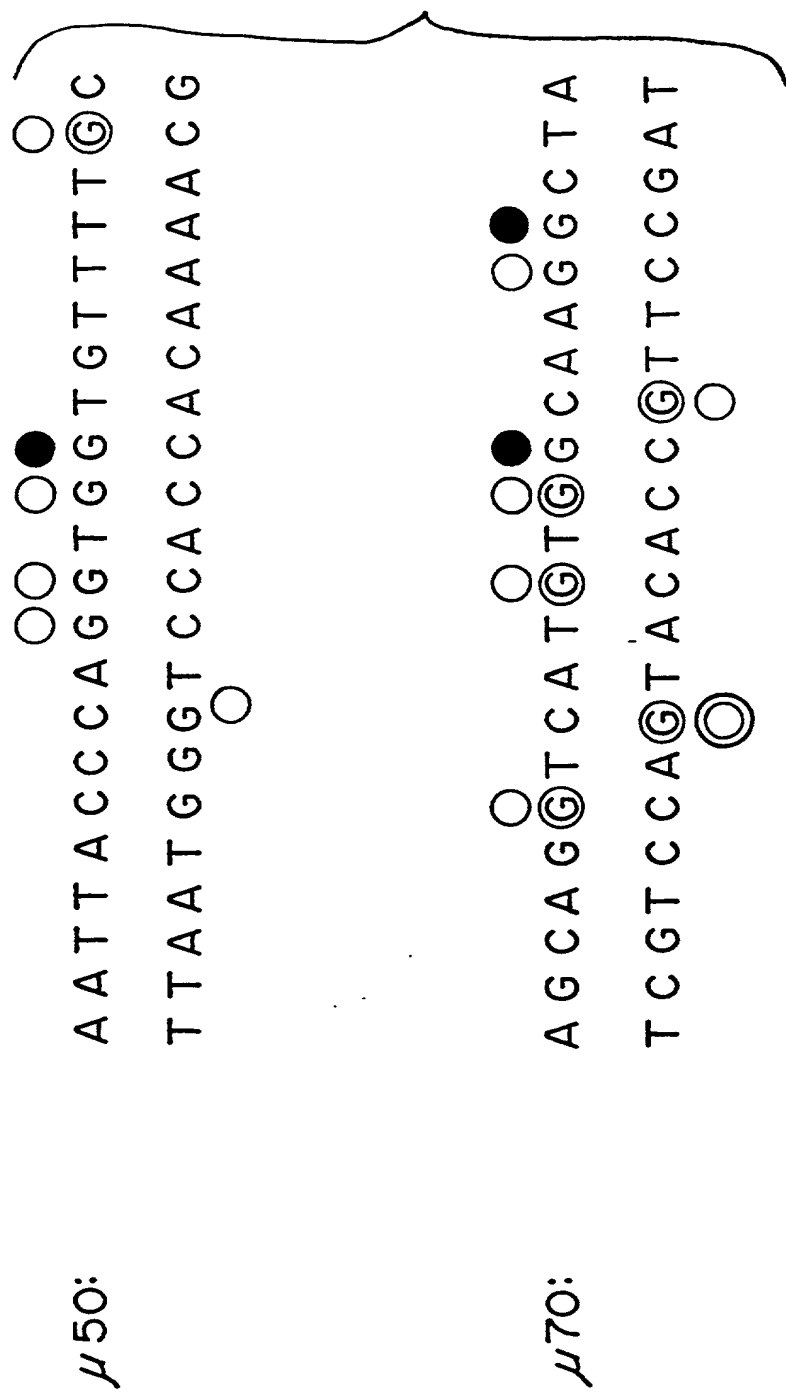


FIG. IIC

FIG.12A

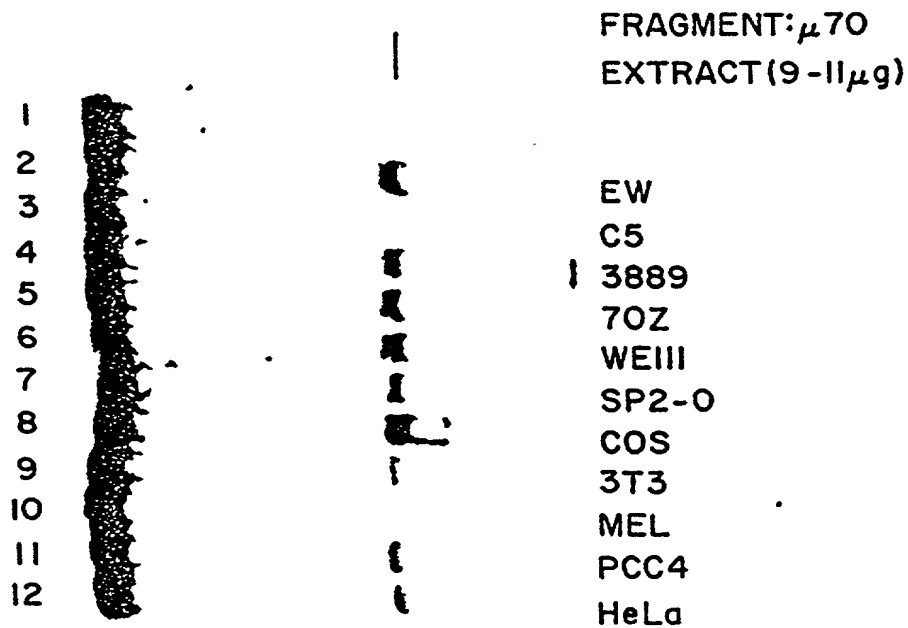
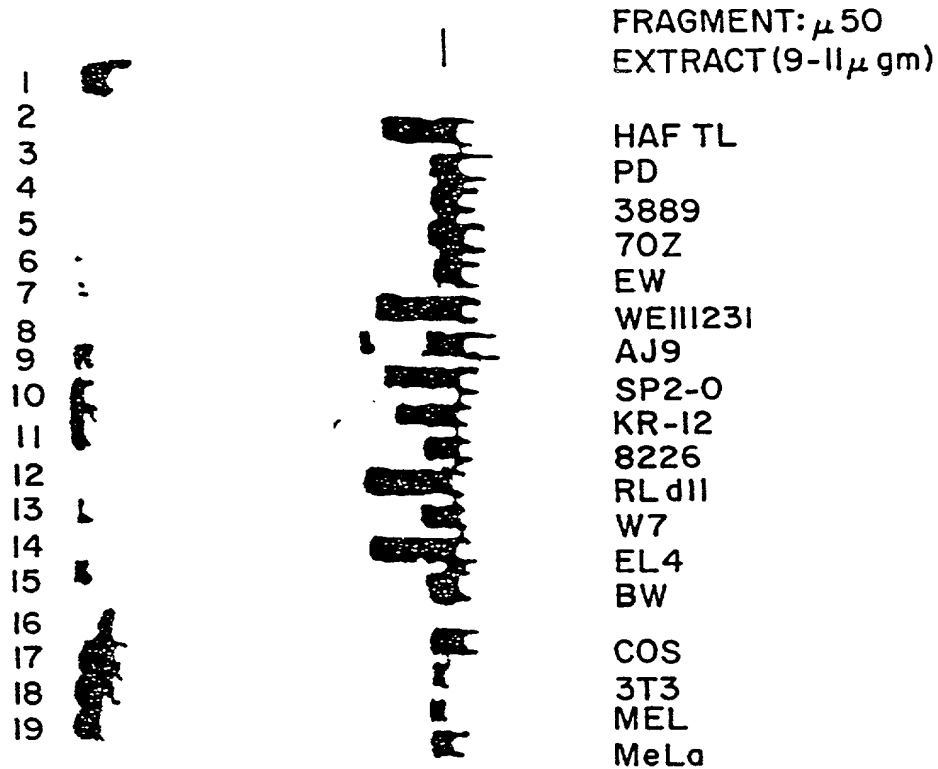


FIG.12B

FIG.13A

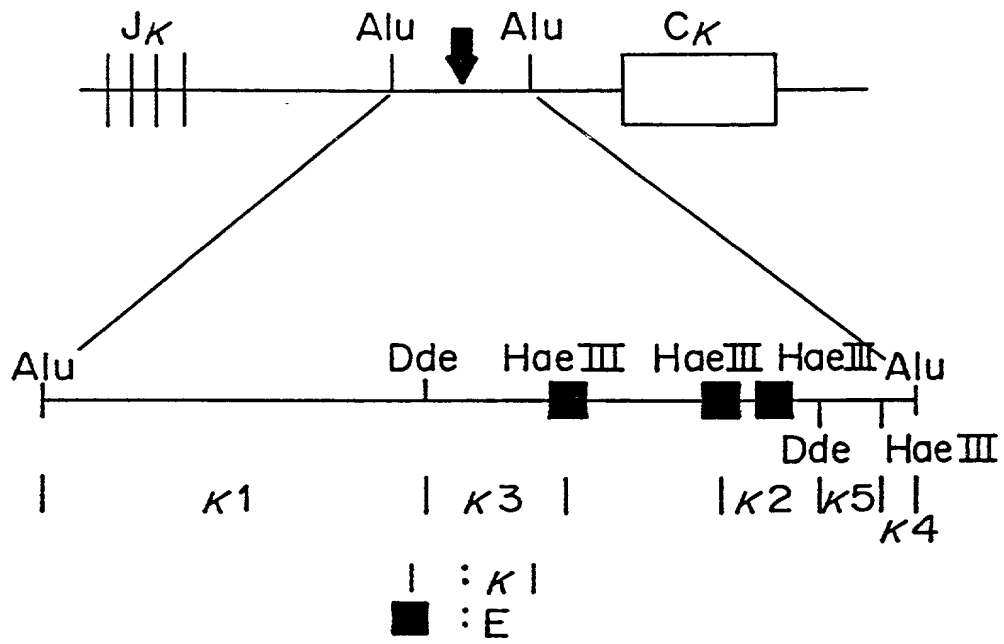


FIG.13B

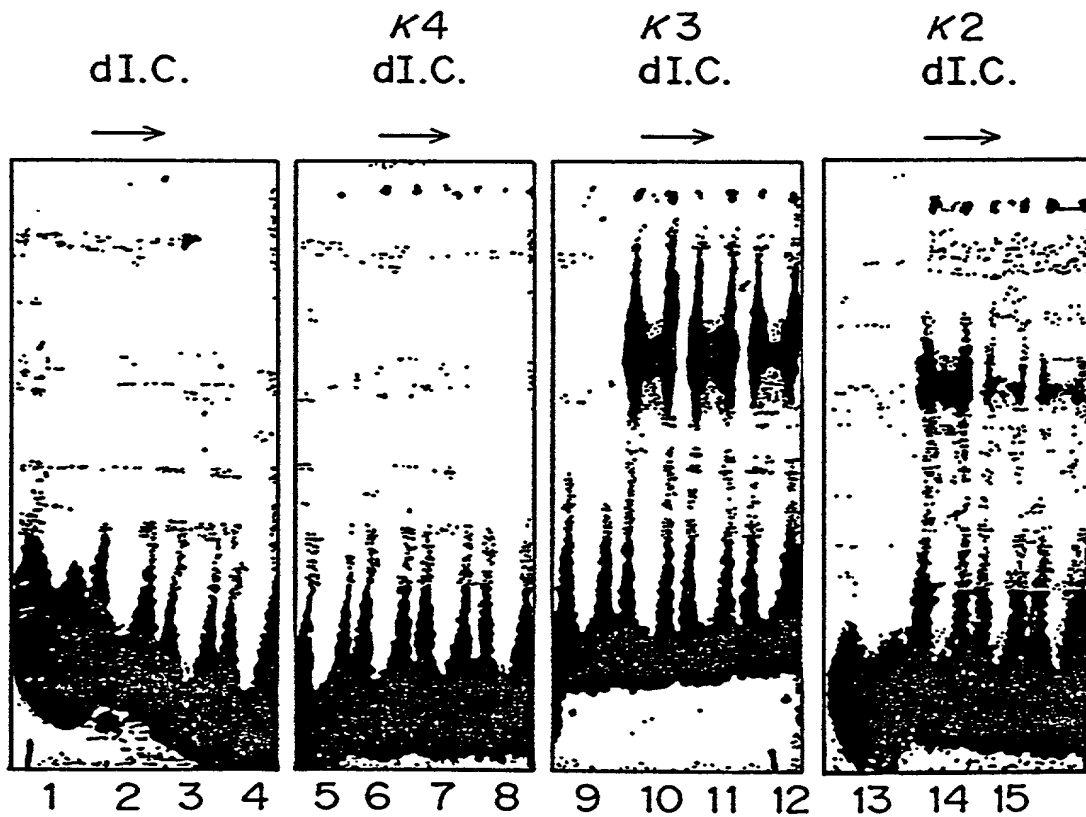


FIG.13C

Extract fragment	EW/c 1 μ l Comp
K2	-
K2	-
K2	M70 10ng
K2	M70 30ng
K2	(M60) ₂ 10
K2	(M60) ₂ 30
K2	(M170) ₂ 20
K2	M170 60
K2	SV 40E 50
K2	SV 40E 150

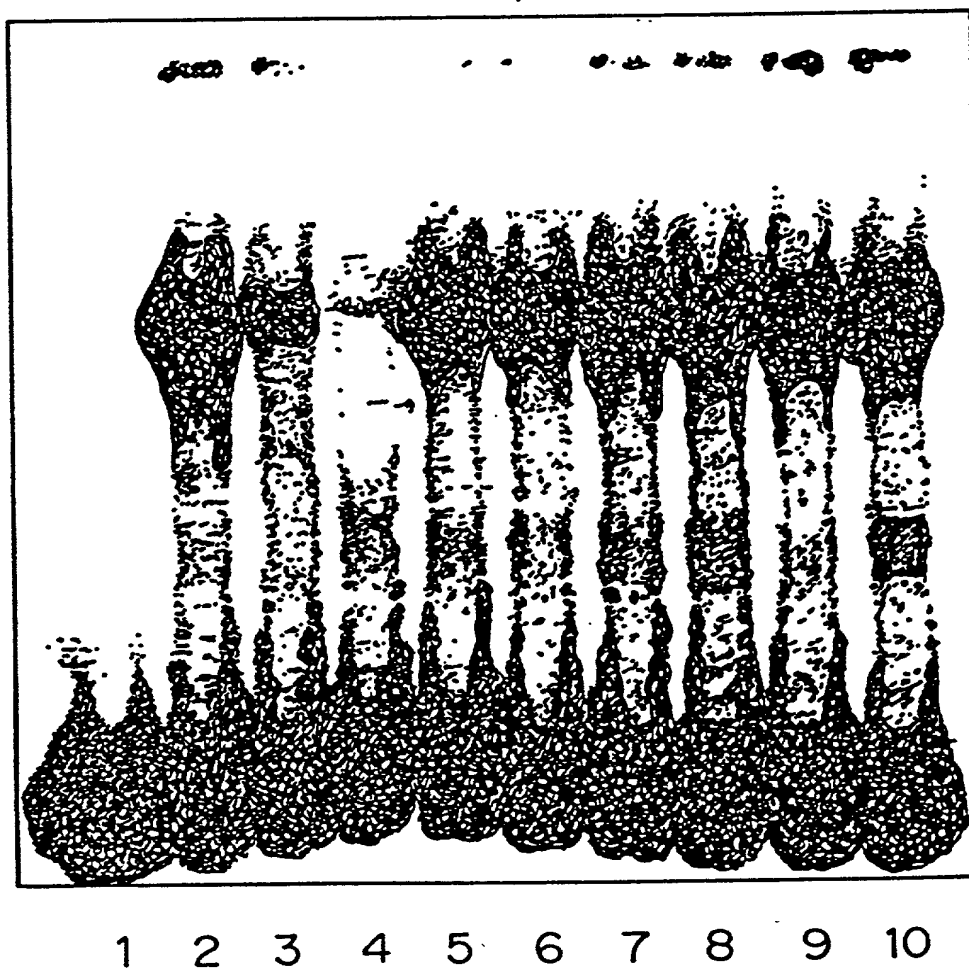


FIG.13D

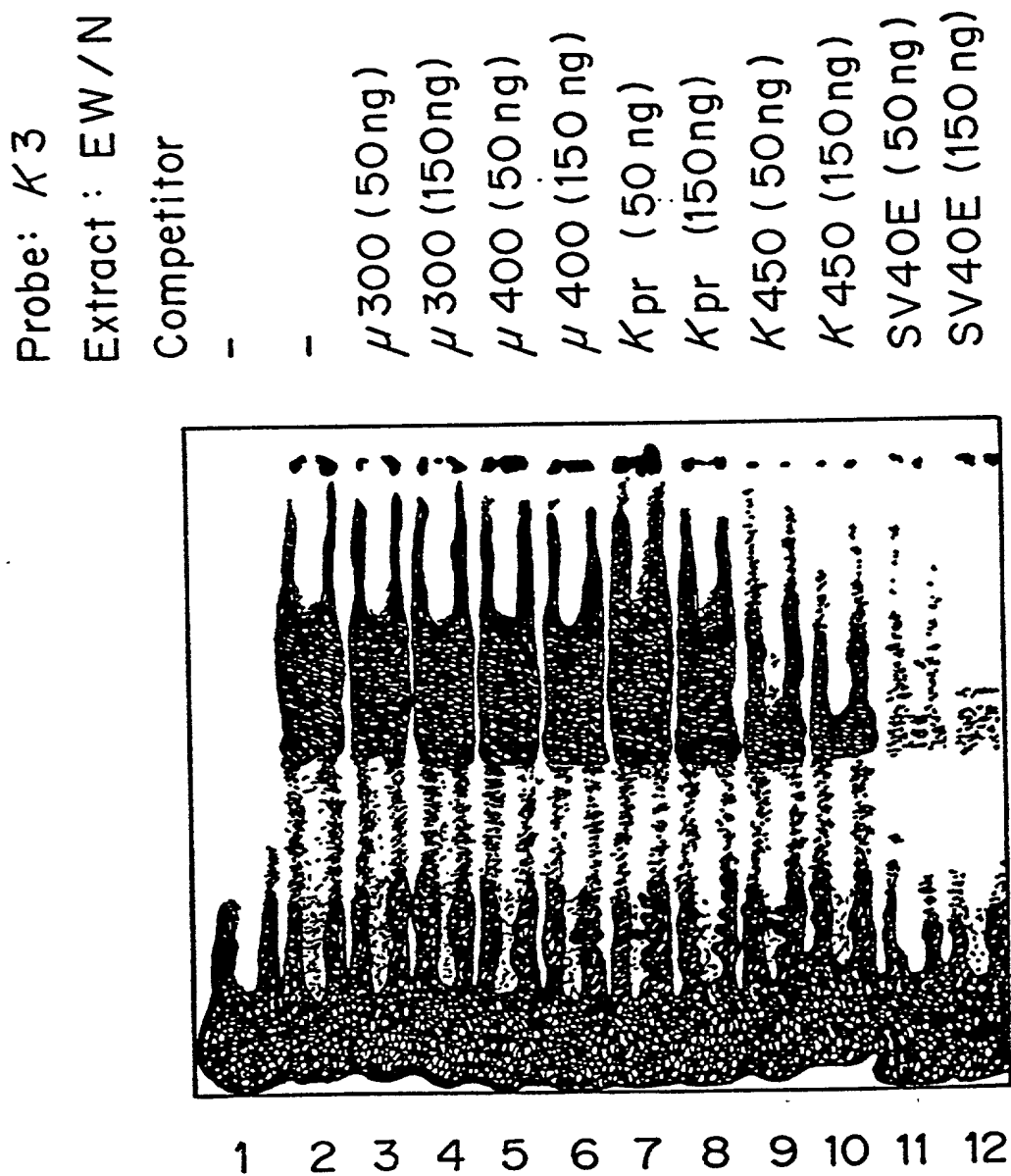


FIG.14

Probe: K-3/Dde*

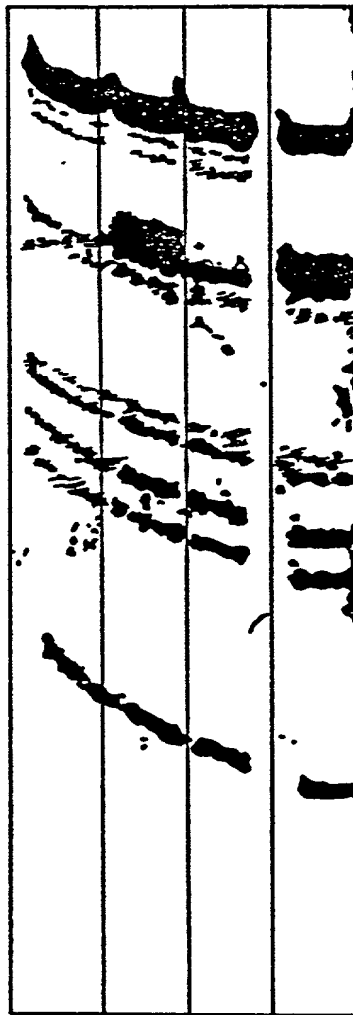
Extract

MPC II

-

WEHI 231

-



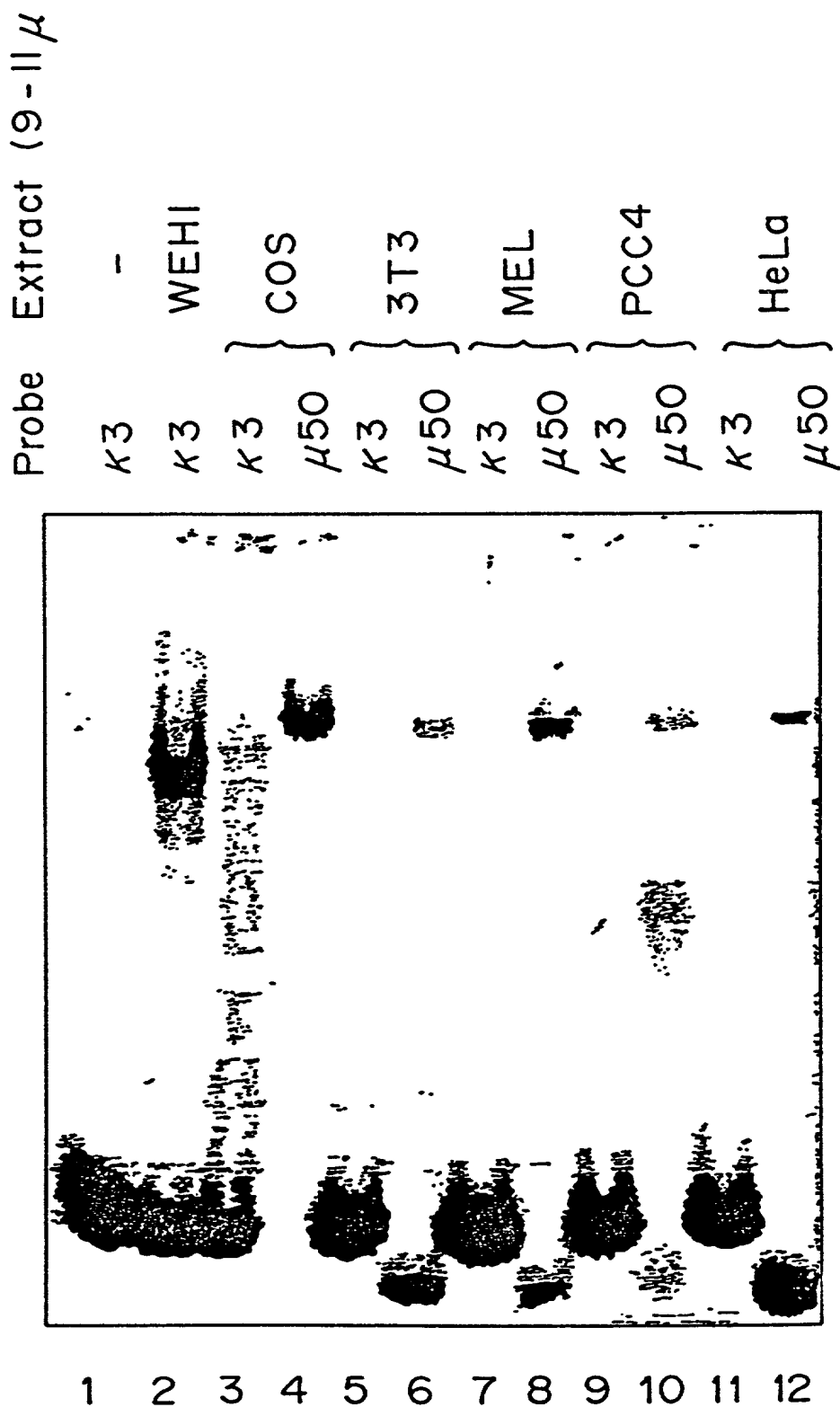
1

2

3

4

FIG.15A



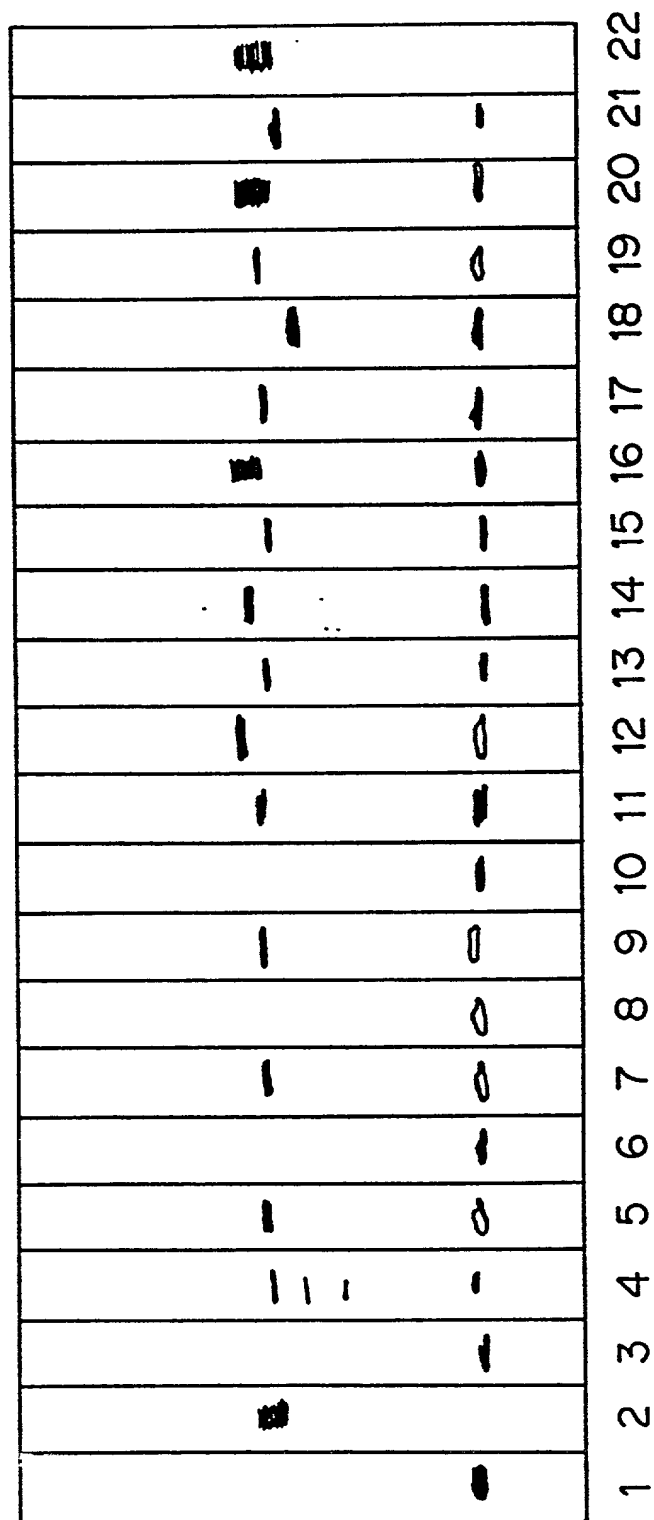
[illegible]

FIG.16

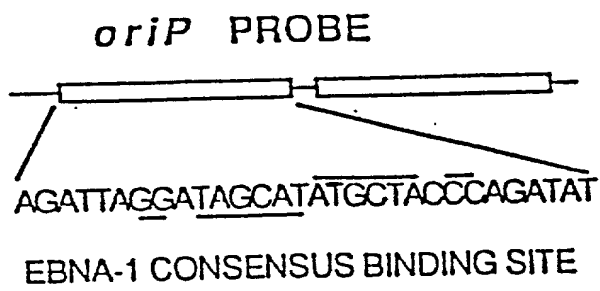
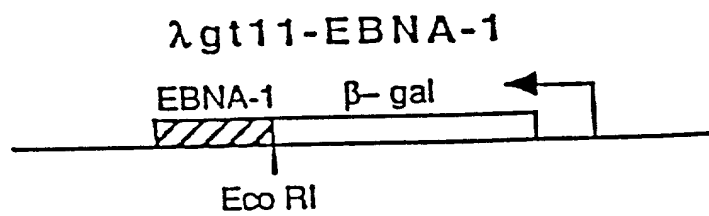


FIG.17

A.

<i>MHC</i>	<u>TGGGGAT</u> TCCCCA
<i>mhc1</i>	TGcGGGATTCCCaA
κ EN	aGGGGAcTttCCg
κ en	aaatt _a AcTttCCg
SVEN	TGGGGAcTttCCA
HIV	TGGGGAcTttCCA
	aaGGGAcTttCCg

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CTGGGGCCCCCAGAGAGGGTGGGGAGATGACACAGTTGTTCCCCCAGCCCTGGCGGGGCG
1 -----+-----+-----+-----+-----+-----+-----+
GGCAGCATGGTTCACTCCAGCATGGGGGCTCCAGAAATAAGAATGTCTAAGCCCCCTGGAG
61 -----+-----+-----+-----+-----+-----+-----+
M V H S S M G A P E I R M S K P L E
GCCGAGAAGCAAGGTCTGGACTCCCCATCAGAGCACACAGACACCGAAAGAAATGGACCA
121 -----+-----+-----+-----+-----+-----+-----+
A E K Q G L D S P S E M T D T E R N G P
GACACTAATCATCAGAACCCCCAAAATAAGACCTCCCCATTCTCCGTGTCCCCAACTGGC
181 -----+-----+-----+-----+-----+-----+-----+
D T N H O N P Q N R T S P F S V S P T G
CCCAGTACAAAGATCAAGGCTGAAGACCCCACTGGCGATTTCAGCCCCAGCAGACCCCCTG
241 -----+-----+-----+-----+-----+-----+-----+
P S T K I K A E D P S G D S A P A A P L
CCCCCTCAGCCGGCCAGCCTCATCTGCCCCAGGCCCAACTCATGTTGACGGGCAGCCAG
301 -----+-----+-----+-----+-----+-----+-----+
P P Q P A Q P N L P Q A Q L M L T G S Q
CTAGCTGGGGACATACAGCAGCTCCTCCAGCTCCAGCAGCTGGTGCTTGTGCCAGGCCAC
361 -----+-----+-----+-----+-----+-----+-----+
L A G D I Q Q L L Q L Q Q L V L V P G H
CACCTCCAGCCACCTGCTCAGTTCTGCTACCGCAGGCCAGCAGAGCCAGCCAGGCCTG
421 -----+-----+-----+-----+-----+-----+-----+
H L Q P P A Q F L L P Q A Q Q S Q P G L
CTACCGACACCAAATCTATTCCAGCTACCTCAGCAAACCCAGGGAGCTCTTCTGACCTCC
481 -----+-----+-----+-----+-----+-----+-----+
L P T P H L F Q L P Q Q T Q G A L L T S
CAGCCCCGGGCGGGCTTCCCACACAGGCCGTGACCCGCCCTACGCTGCCCCGACCCGCAC
541 -----+-----+-----+-----+-----+-----+-----+
Q P R A G L P T Q A V T R P T L P D P H
CTCTCGCACCCGCAGCCCCCAAATGCTTGGAGCCACCATCCCACCCCGAGGAGCCCAGT
601 -----+-----+-----+-----+-----+-----+-----+
L S H P Q P P K C L E P P S H P E E P S
GATCTGGAGGAGCTGGAGCAATTGGCCCGCACCTTCAAGCAACGCCGCATCAAGCTGGGC
661 -----+-----+-----+-----+-----+-----+-----+
D L E E L E Q F A R T F K Q R R I K L G
TTCACGCAGGGTGATGTGGGCCTGGCCATGGGCAAGCTCTACGCCAACGACTTCAGCCAG
721 -----+-----+-----+-----+-----+-----+-----+
F T Q G D V G L A M G K L Y G N D F S Q
C G P G H G Q A L R Q R L Q P D

FIG. 18A

204070-574200T

1261 GTTACTACCTTATCCTCAGCTGTGGGGACGCTCCACCCCAGCCGGACAGCTGGAGGGGGT
-----+-----+-----+-----+-----+
V T T [L] S S A V G T [L] H P S R T A G G G
Y Y L I L S C G D A P P Q P D S N M G W

1321 GGGGGCGGGGCGGGGCTGCGCCCCCCTCAATTCCATCCCCTCTGTCACTCCCCACCC
-----+-----+-----+-----+-----+
G G G G G A A P P L N S I P S V T P P P
G M G R G C A P P Q F H P L C H S P T P

1381 CCGGCCACCAACAGCACAAACCCAGCCCTCAAGGCAGCCACTCGGCTATCGGCTTG
-----+-----+-----+-----+-----+
P A T T N S T N P S P Q G S H S A I G L
G H N Q Q H K P Q P S R Q P L G Y M L V

1441 TCAGGCCTGAACCCCAGCACGGGGTAAGTGGGTGCACGTGGGAAGCTGTGGGGAGAAGCA
-----+-----+-----+-----+-----+
S G L H P S T G +
A P E P Q N G V S G C T W E A V G R S R

1501 GCGTCGCTGCTCCTTCTAGGGTGGGGAGCGGCACCCAGTTATGTTGGCAGGTCCCTGCC
-----+-----+-----+-----+-----+
V A A A S R V G S G T P V M L A G P C P

1561 CCTGCTAATGCCTCTGCTTTGCCTCTTGCAGAAGCACAATGGTGGGGTTGAGCTCCGGCT
-----+-----+-----+-----+-----+
C +

1621 GAGTCCAGCCCTCATGAGCAACAACCCTTTGGCCACTATCCAAGGTGCGTGCTGCCTCAT
-----+-----+-----+-----+-----+
GTCACACCCATCGTCACCAGCCCCGGAATTTCGAG

1681 -----+-----+-----+-----+-----+

FIG.18A (CONT.)

ACGACCATTTCCTGCTTCGAGGCCCTCAACCTGAGCTTCAAGAACATGTGCAAACTCAAG
 781 -----+-----+-----+-----+-----+-----+-----+
 T T I S R F E A L N L S F K N M C K L K
 D H F P L R G P Q P E L Q E H V Q T Q A

 CCCCTCCTGGAGAAGTGGCTCAACGATGCAGAGACTATGTCTGTGGACTCAAGCCTGCCC
 841 -----+-----+-----+-----+-----+-----+-----+
 P L L E K W L N D A E T M S V D S S L P
 P P G E V A Q R C R D Y V C G L K P A Q

 AGCCCCAACAGCTGAGCAGCCCCAGCCTGGGTTTCGAGCCTGCCGGCCGGAGACGCAAG
 901 -----+-----+-----+-----+-----+-----+-----+
 S P N O L S S P S L G F E P A G R R R K
 P Q P A E Q P Q P G F R A C M P E T Q E

 AAGAGGACCAGCATCGAGACAAACGTCGCTTCGCCTTAGAGAAGAGTTTTCTAGCGAAC
 961 -----+-----+-----+-----+-----+-----+-----+
 K R T S I E T N V R F A L E K S F L A N
 E D Q M R D K R P L R L R E E F S S E P

 CAGAAGCCTACCTCAGAGGAGATCCTGCTGATCGCCGAGCAGCTGCACATGGAGAAGGAA
 1021 -----+-----+-----+-----+-----+-----+-----+
 Q K P T S E E I L L I A E Q L H M E K E
 E A Y L R G D P A D R R A A A H G E G S

 GTGATCCGCGTCTGGTTCTGCAACCGGCCCCAGAAGGACAAACGCATCAACCCCTGCAGT
 1081 -----+-----+-----+-----+-----+-----+-----+
 V I R V W F C N R R Q K E K R I H P C S
 D P R L V L Q P A P E G E T H Q P L Q C

 GCGGCCCCCATGCTGCCCAGCCCAGGGAAGCCGGCCAGCTACAGCCCCCATATGGTCACA
 1141 -----+-----+-----+-----+-----+-----+-----+
 A A P M L P S P G K P A S Y S P H H V T
 G P H A A Q P R E A G Q L Q P P Y G H T

 CCCCAAGGCGGCGGGGACCTTACCGTTGTCCCAAGCTTCCAGCAGTCTGAGCACAACA
 1201 -----+-----+-----+-----+-----+-----+-----+
 P Q G G A G T L P [L] S Q A S S S [L] S T T
 P A G R G D L T V V P S F Q Q S E H N S

FIG.18A (CONT.)

↓

```

1411 CCTCAAGGCAGCCACTCGGCTATCGGCTTGTGAGGCCTGAACCCCAGCACGGGGCCCTGGC
-----+-----+-----+-----+-----+-----+-----+
P Q G S H S A I G L S G L N P S T G P G
S A Q P L G Y R L V M P E P Q M G P N P

1471 CTCTGGTGGAACCCCTGCCCTTACCAGCCTTGATGGCAGCGGGAATCTGGTGCTGGGGGC
-----+-----+-----+-----+-----+-----+-----+
L W W N P A P Y Q P .
L V E P C P L P A L M A A G I W C W G Q

1531 AGCCGGTGACCCCCGGGGAGCCCTGGCCTGGTGACCTCGCCGCTCTTCTTGAATCATGC
-----+-----+-----+-----+-----+-----+-----+
P V Q P R G A L A W .

1591 TGGGCTGCCCCTGCTCAGCACCCCGCCTGGTGTGGGCCTGGTCTCAGCAGCGGCTGCGGG
-----+-----+-----+-----+-----+-----+-----+

1651 TGTGGCAGCCTCCATCTCCAGCAAGTCTCCTGGCCTCTCCTCCTCATCCTCTTCATCCTC
-----+-----+-----+-----+-----+-----+-----+

1711 ATCCTCCTCCTCCTCCACTTGCAGCGAGACGGCAGCACAGACCCTGGAGGTCCAGGGGGG
-----+-----+-----+-----+-----+-----+-----+

1771 CCCGAGGCAGGGTCCAAACCTGAGTGAGGGCCAGCCATGCCTCCCCTCCCATTCTCTGG
-----+-----+-----+-----+-----+-----+-----+

1831 TCCCTGCCCCGGAATTC
-----+-----

```

FIG.18B

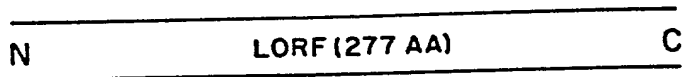
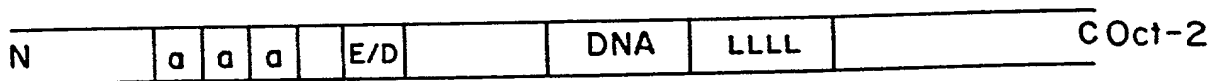


FIG.18C

204070-547E00F

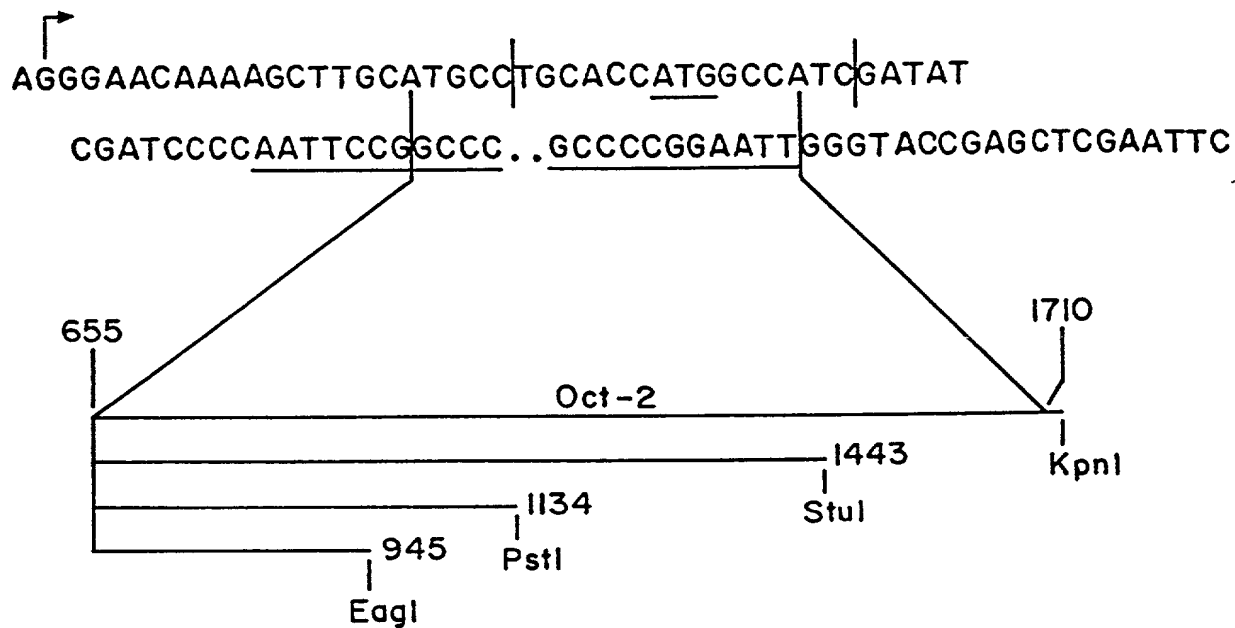


FIG.19

cut SKKQBVLFSEEQEAIRLAFALDPYPNVGTIEFLANELGLATRTITNWEHNHRMLKQOV
* * * *

en EKRPBTAFSSEQLARLKREFFENRXYLTERRRQQLSSELGLNEAQIKIWFONKRAKIKKST
* * *

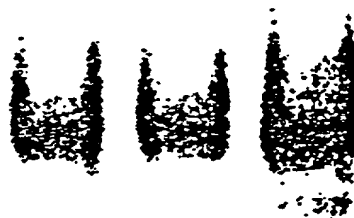
Antp RKRGBQTYTRYQTLELEKEFFHENRYLTERRRRIEIAHALCLTERQIKIWFONRRMKWKKEN
* * *

WE N B

FIG. 20

FIGURE 21A

70Z 70Z LPS (20h) WEHI 231

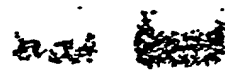


1 2 3 4 5 6

FIGURE 21B

WEHI 231
PD

PDILPS
(20h)



1 2 3 4 5 6

FIGURE 22A

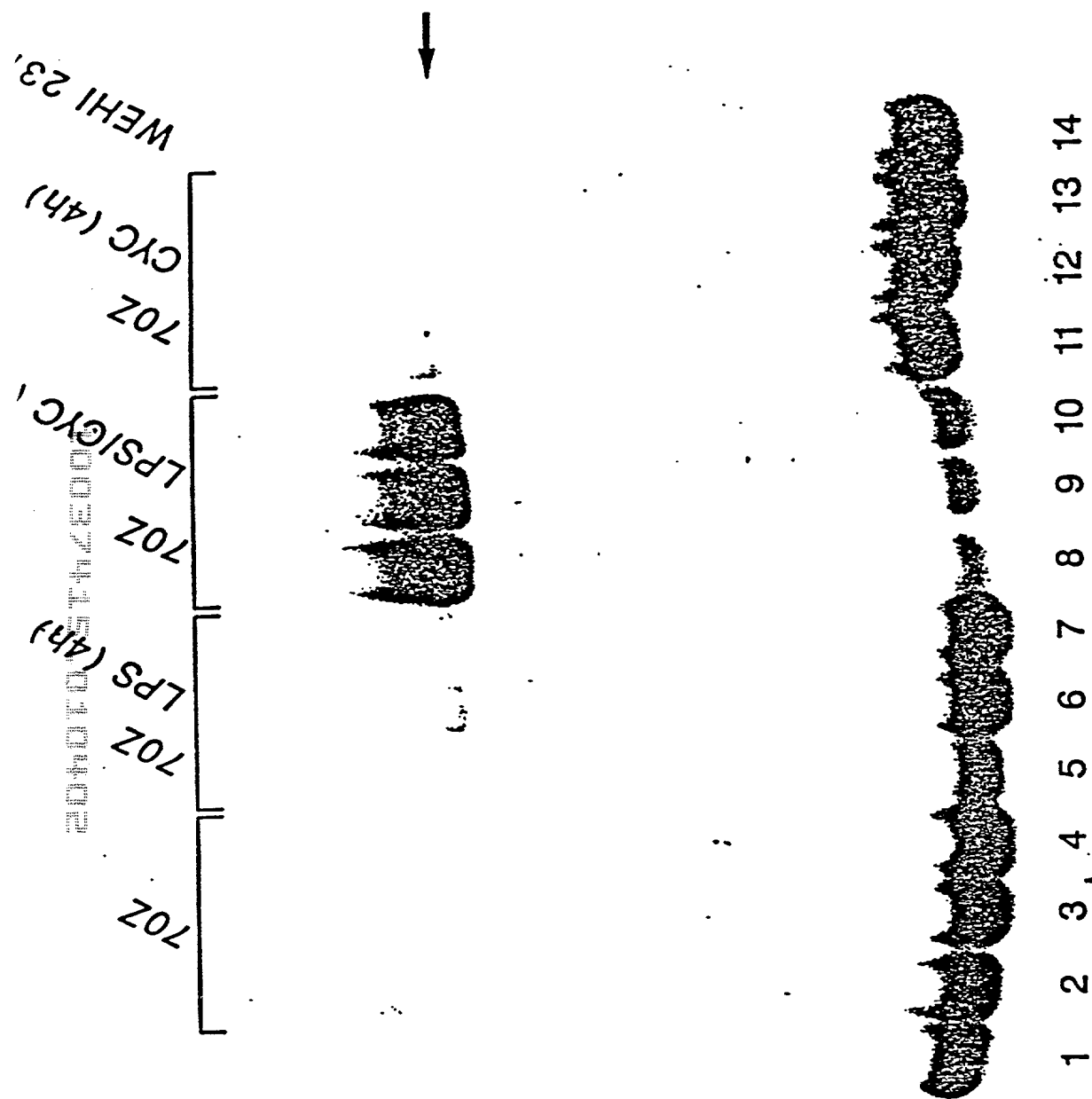
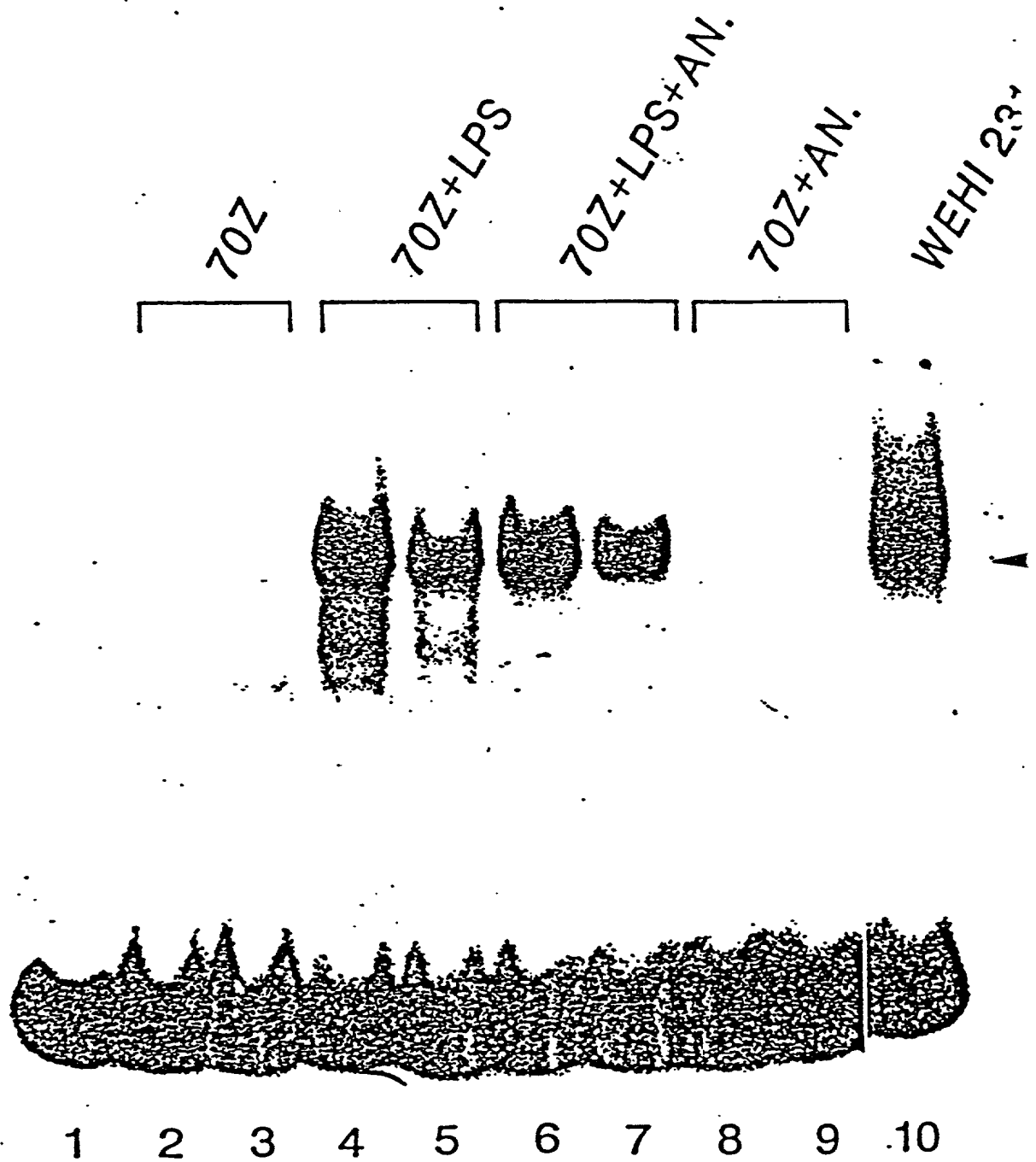


FIGURE 22B



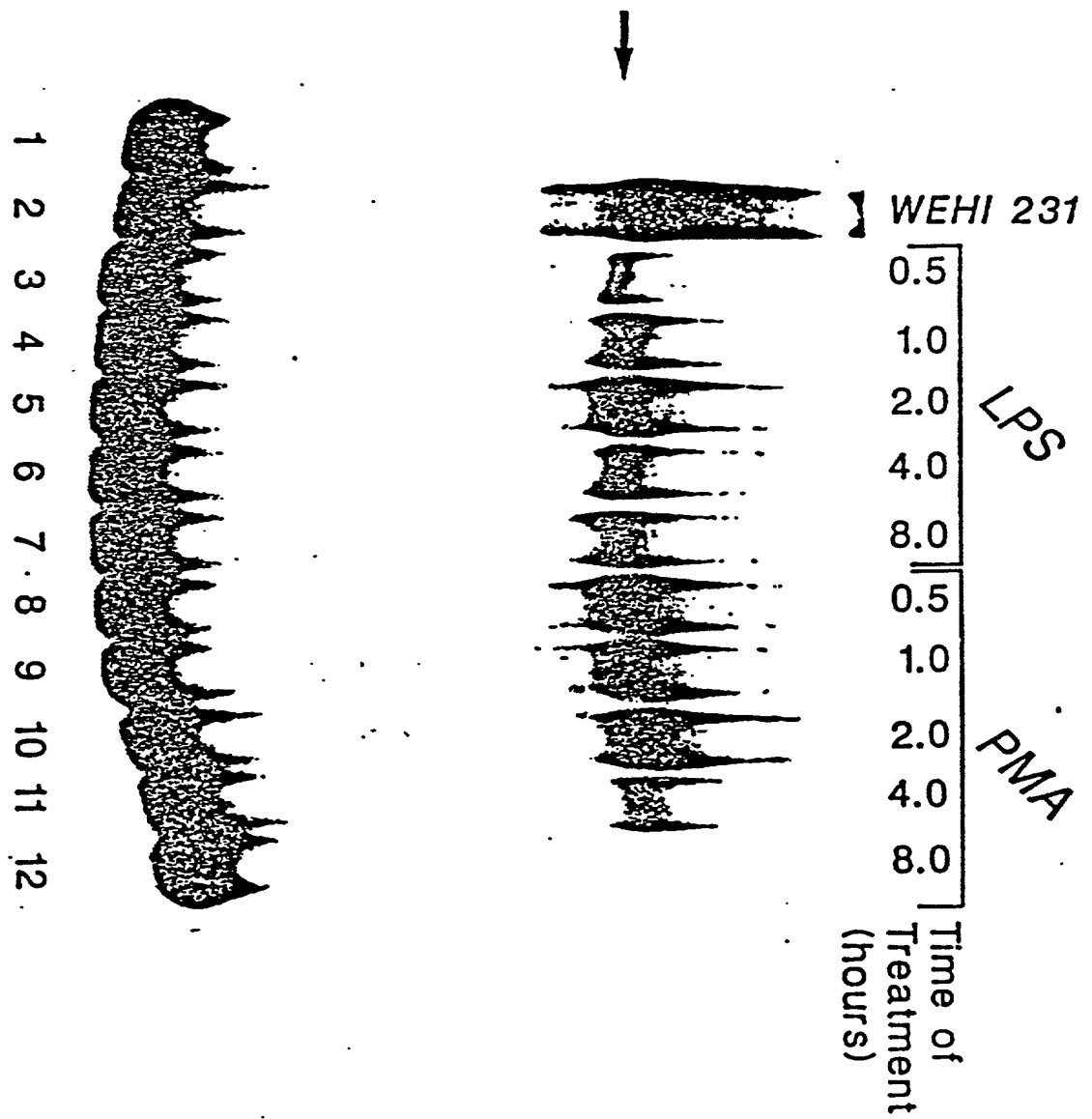
10037415.010403

FIGURE 23A



204070" 5142E00T

FIGURE 23B



10037415.010402

FIGURE 24A

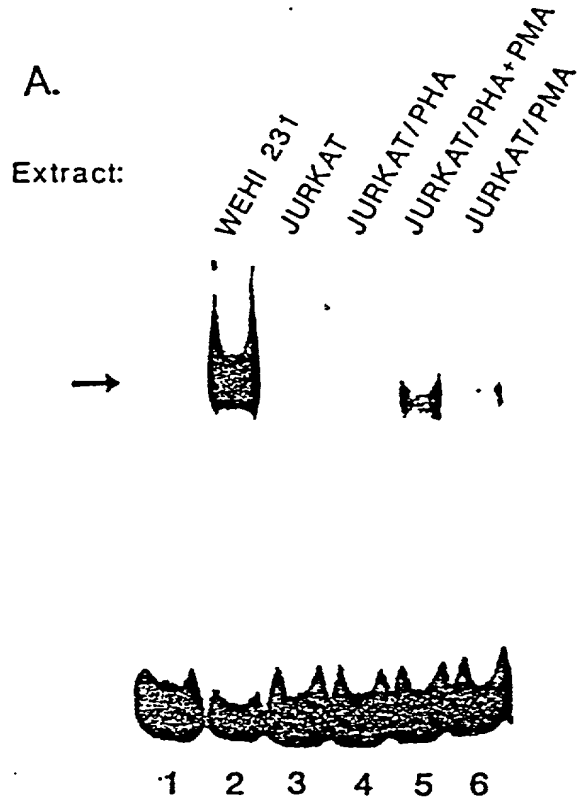


FIGURE 24B



10.1	100
10.2	100
10.3	100
10.4	100
10.5	100
10.6	100
10.7	100
10.8	100
10.9	100
10.10	100
10.11	100
10.12	100
10.13	100
10.14	100
10.15	100
10.16	100
10.17	100
10.18	100
10.19	100
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10.31	100
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10.34	100
10.35	100
10.36	100
10.37	100
10.38	100
10.39	100
10.40	100
10.41	100
10.42	100
10.43	100
10.44	100
10.45	100
10.46	100
10.47	100
10.48	100
10.49	100
10.50	100
10.51	100
10.52	100
10.53	100
10.54	100
10.55	100
10.56	100
10.57	100
10.58	100
10.59	100
10.60	100
10.61	100
10.62	100
10.63	100
10.64	100
10.65	100
10.66	100
10.67	100
10.68	100
10.69	100
10.70	100
10.71	100
10.72	100
10.73	100
10.74	100
10.75	100
10.76	100
10.77	100
10.78	100
10.79	100
10.80	100
10.81	100
10.82	100
10.83	100
10.84	100
10.85	100
10.86	100
10.87	100
10.88	100
10.89	100
10.90	100
10.91	100
10.92	100
10.93	100
10.94	100
10.95	100
10.96	100
10.97	100
10.98	100
10.99	100
11.00	100

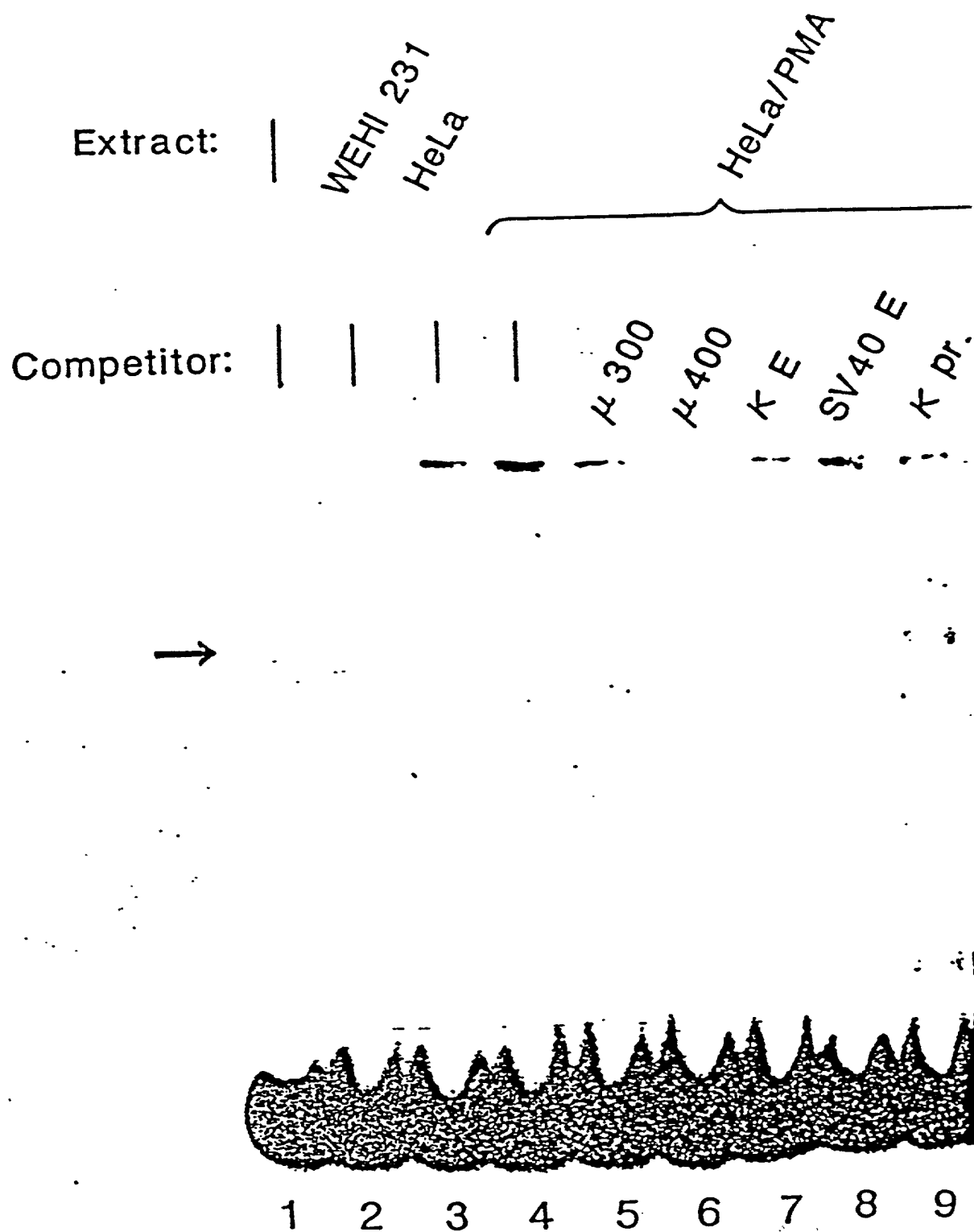
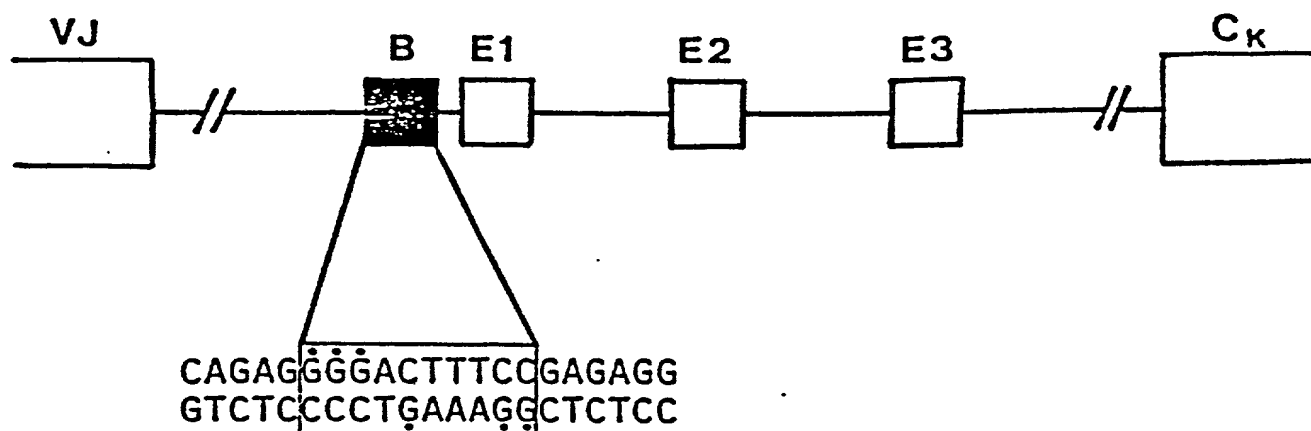


FIGURE 25

κ -Enhancer



HIV LTR

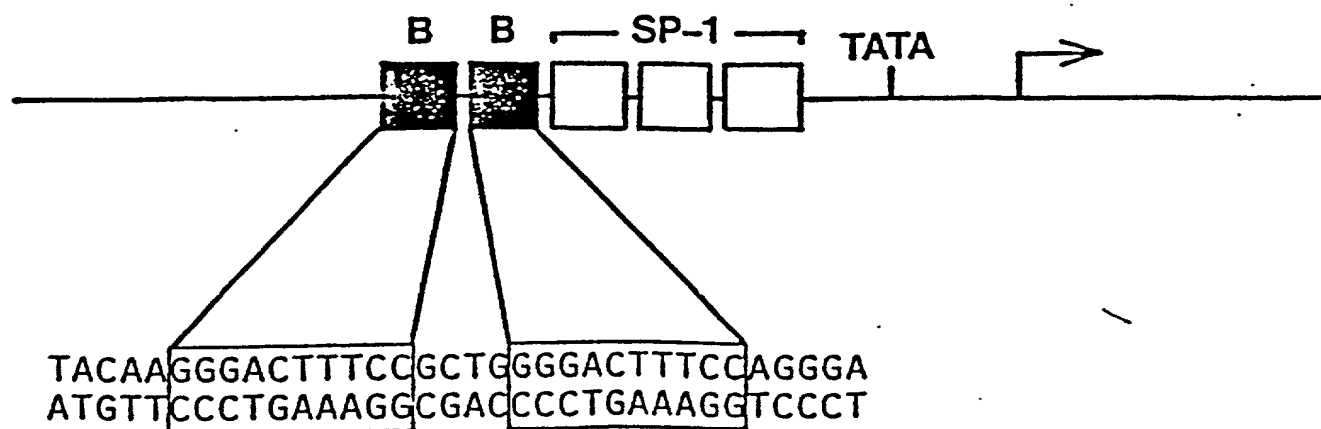
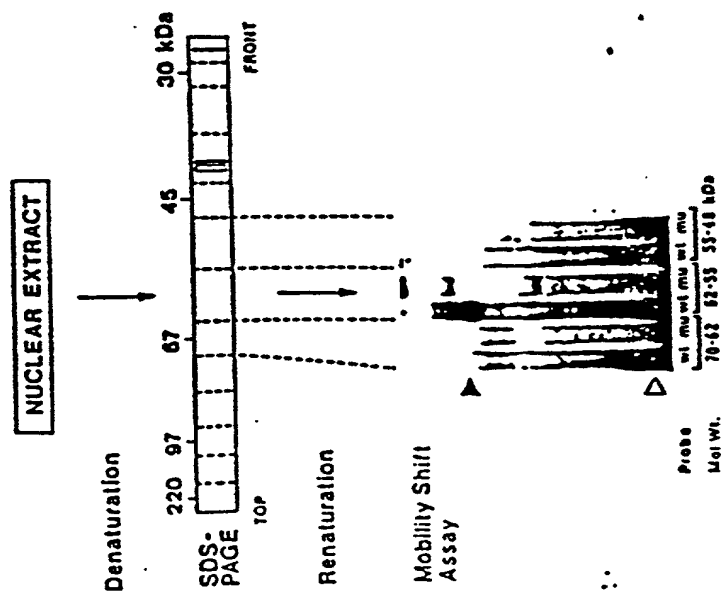


FIGURE 26

A



B

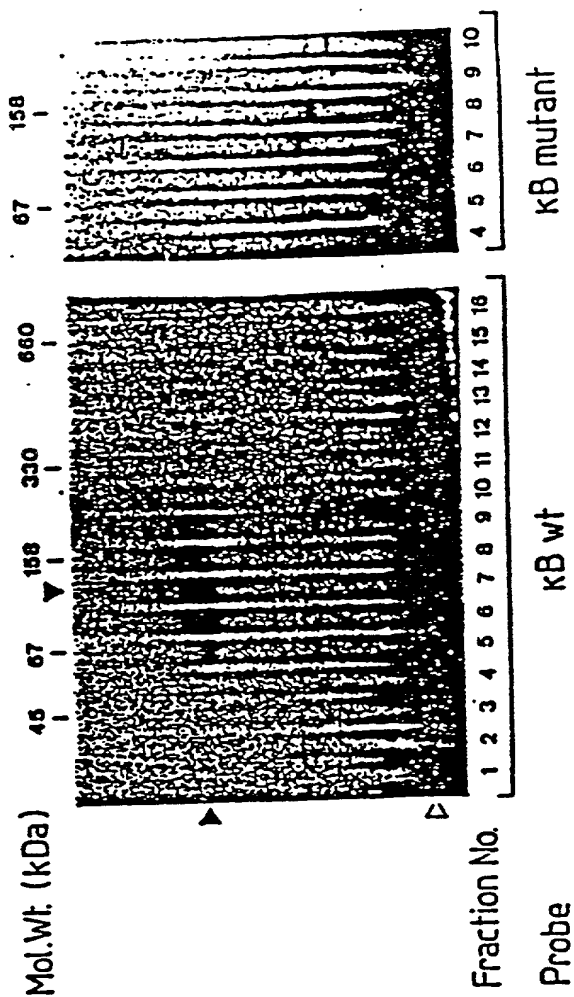


FIGURE 27 "SHEET"

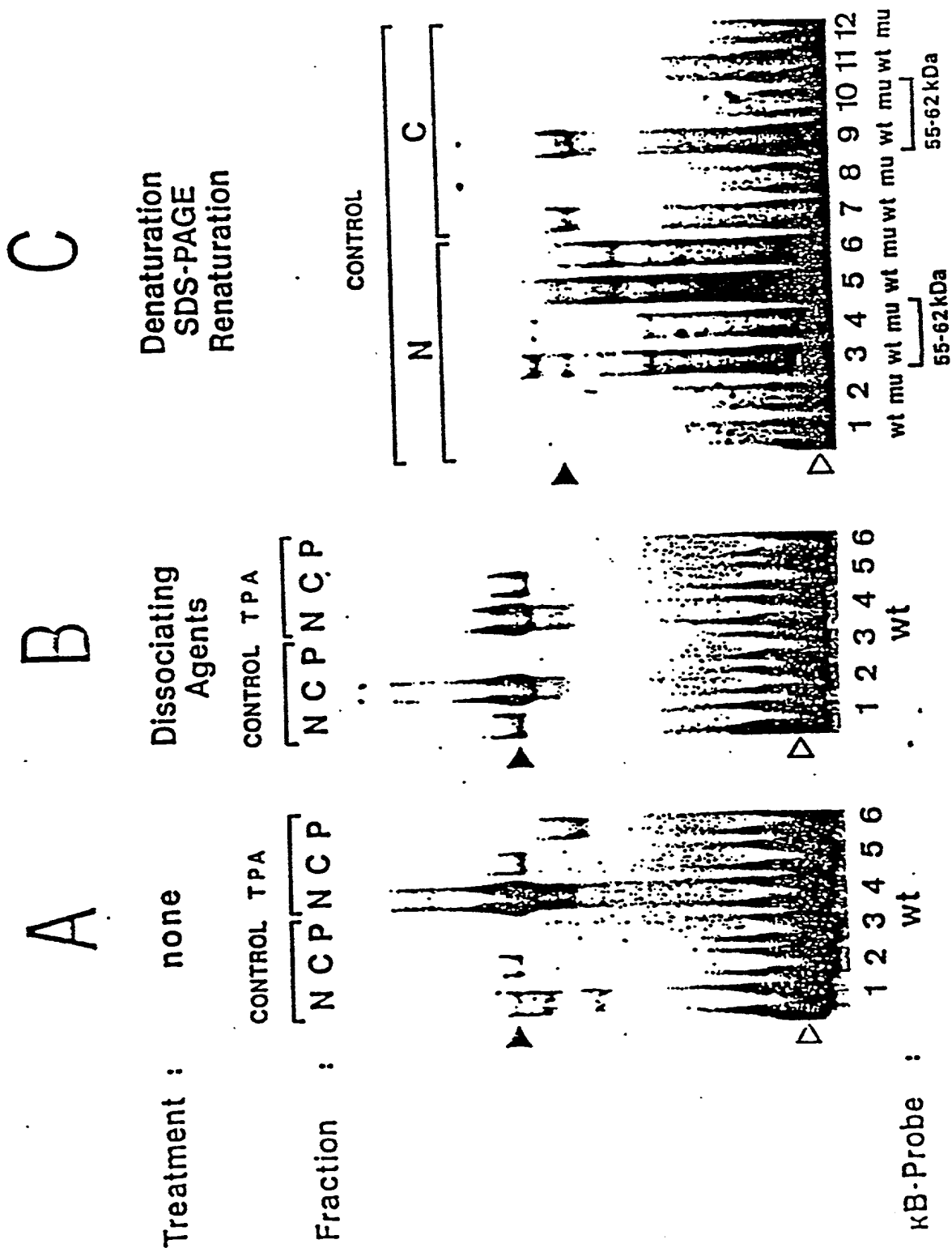
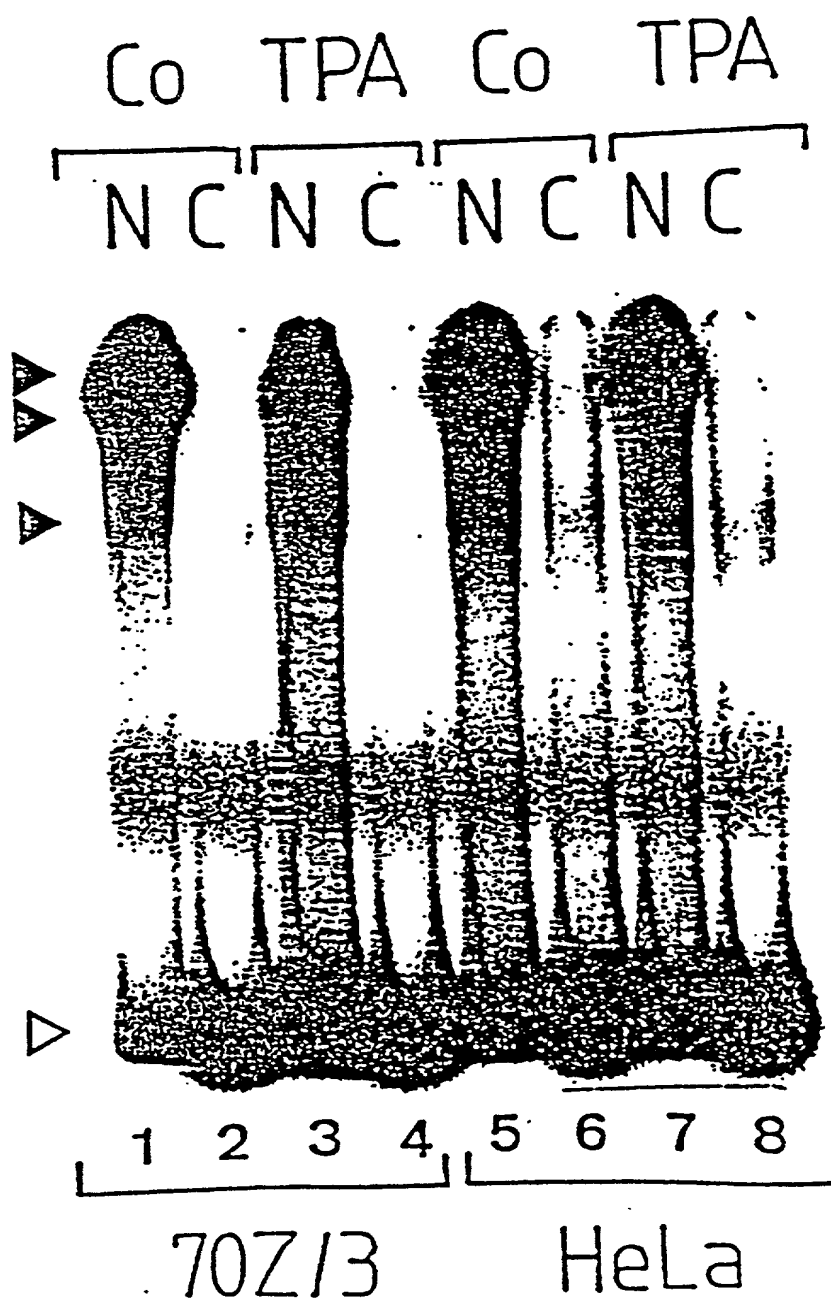


FIGURE 28



10037415.010402

FIGURE 29

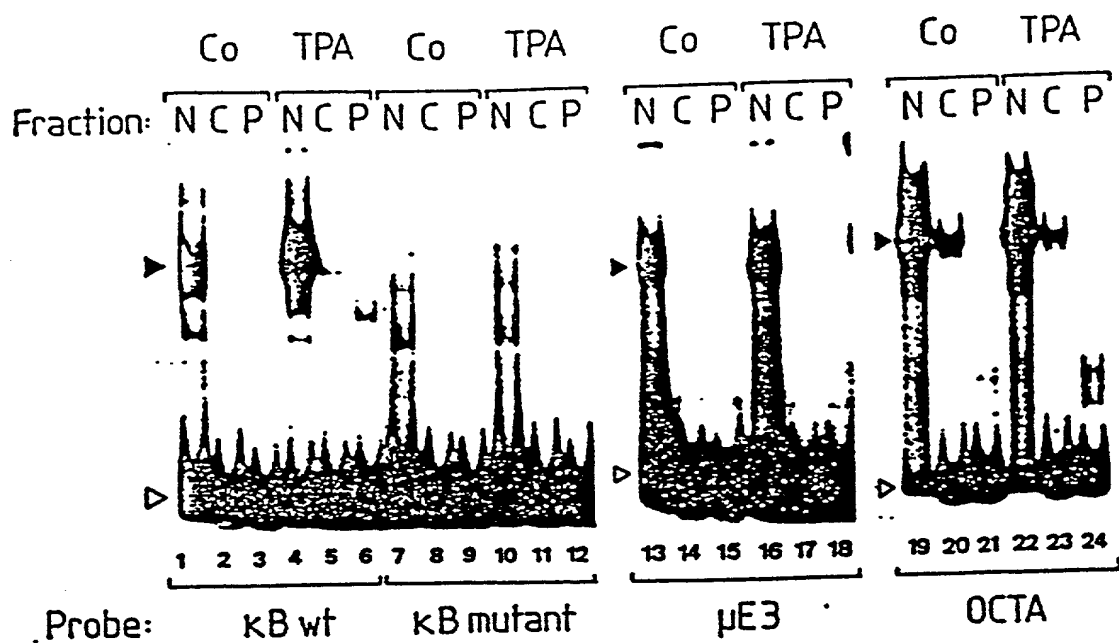


FIGURE 30

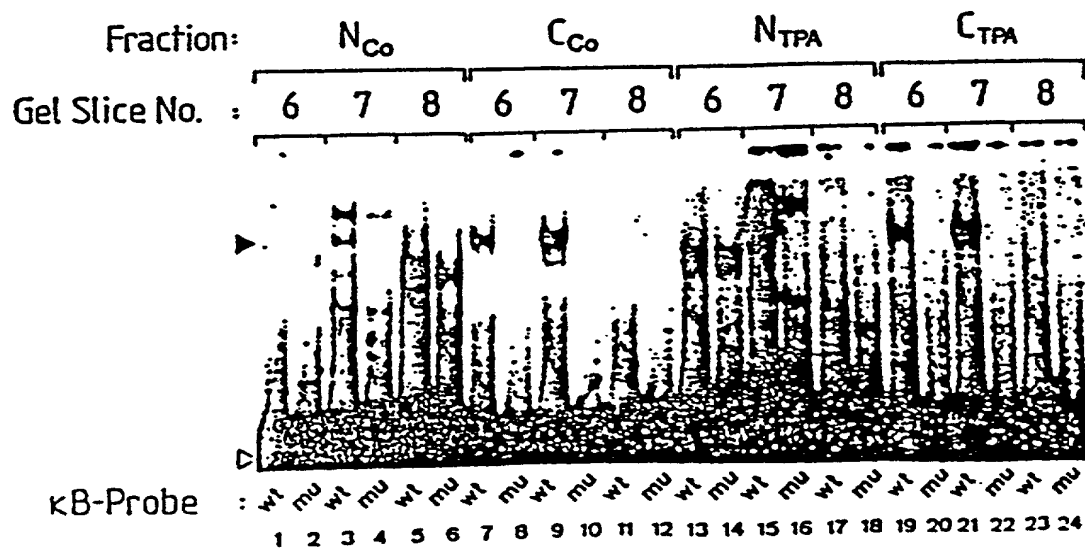


FIGURE 31

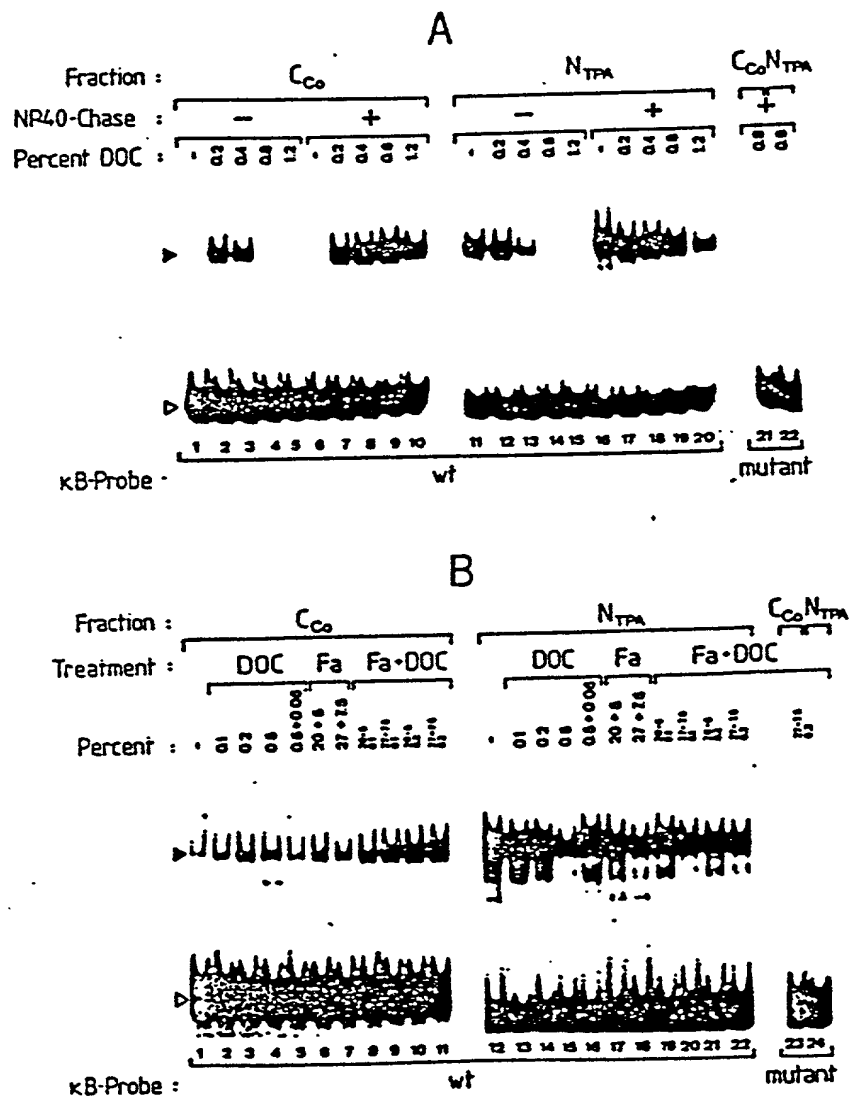


FIGURE 32

70Z/3

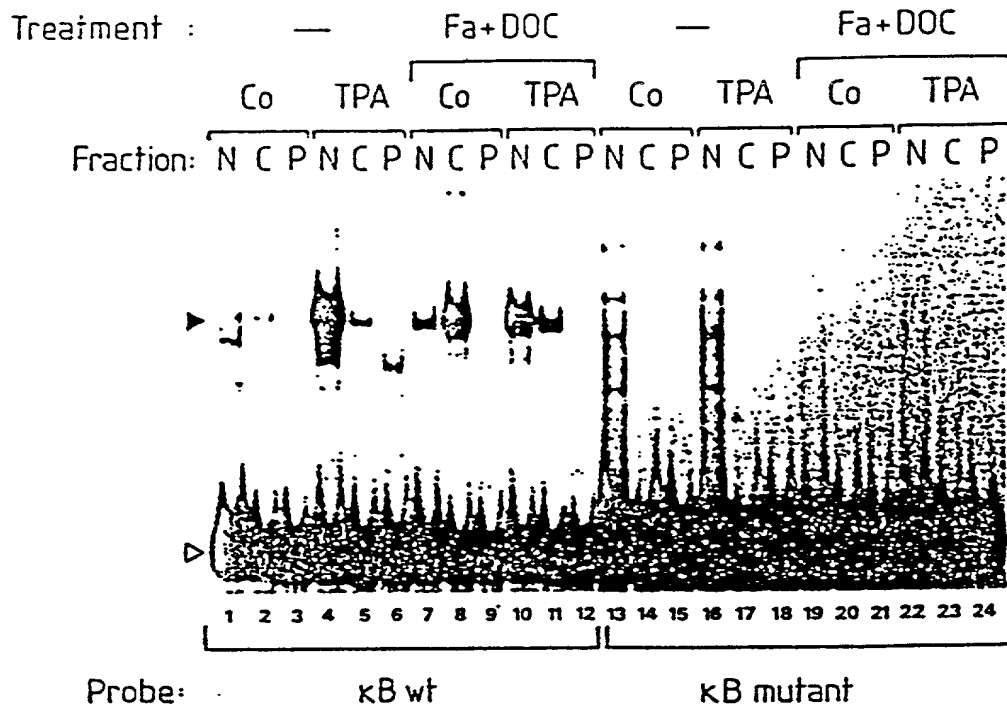


FIGURE 33

HeLa

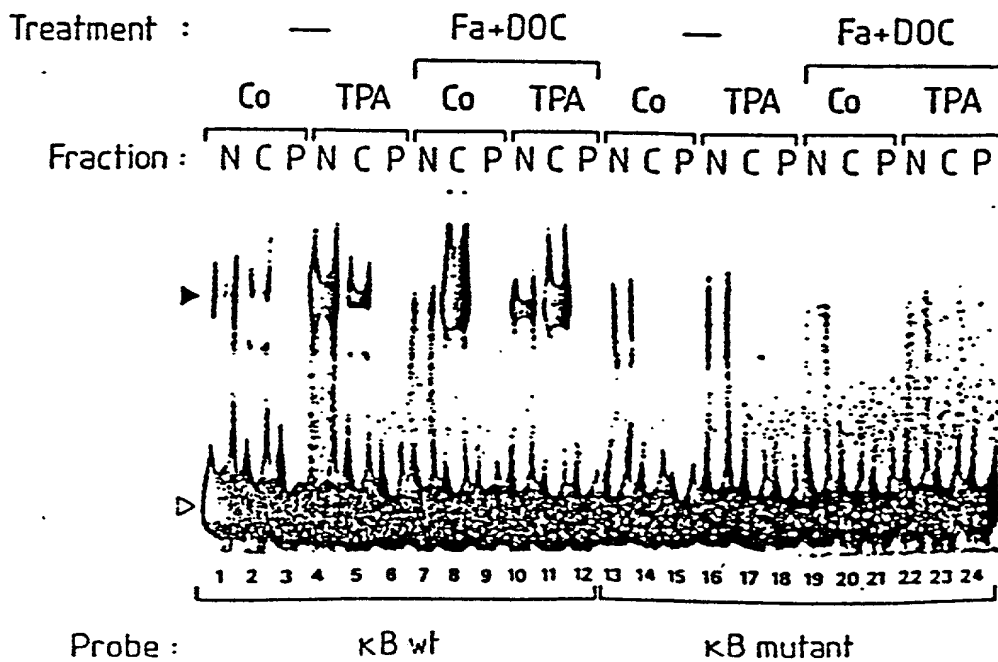
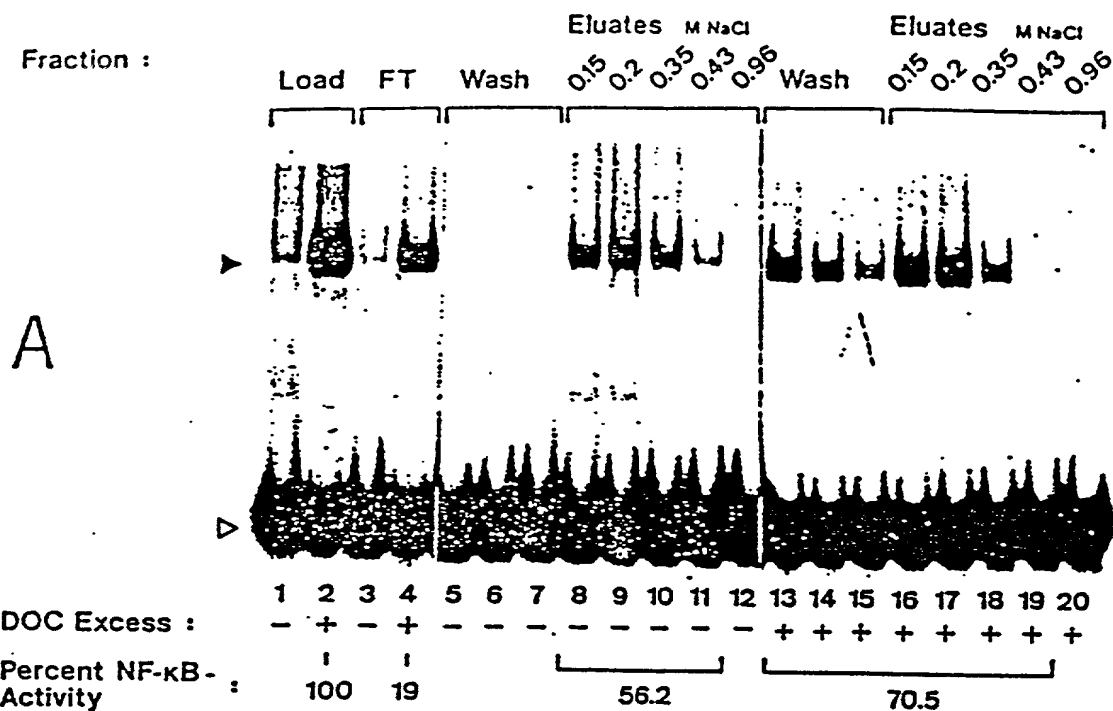


FIGURE 34



NF- κ B in :

0.2M NaCl Fraction								Nuclear Extract (TPA)										
+ Cytosol	4	-	-	1	2	4	-	-	4	-	-	1	2	4	-	-		
+ NF- κ B-depleted Cytosol	-	4	-	-	-	-	1	2	4	-	4	-	-	-	-	1	2	4

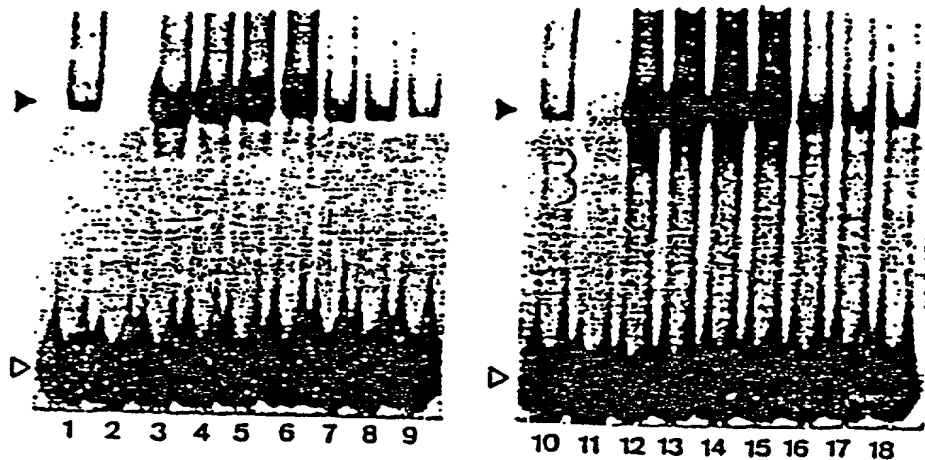


FIGURE 35

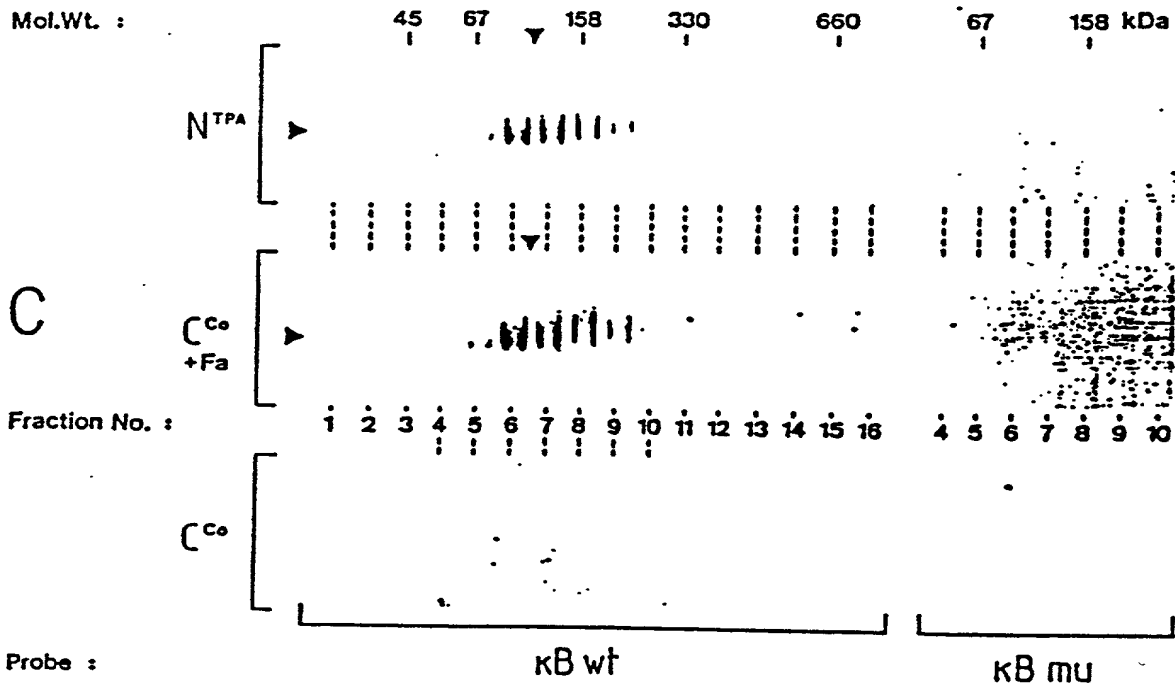
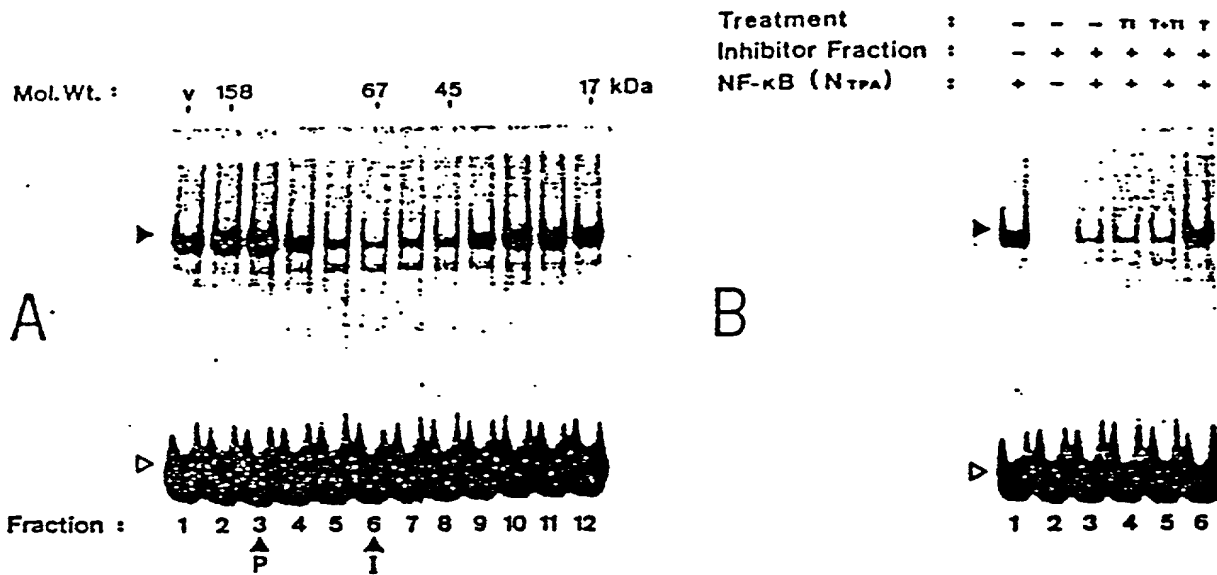


FIGURE 36

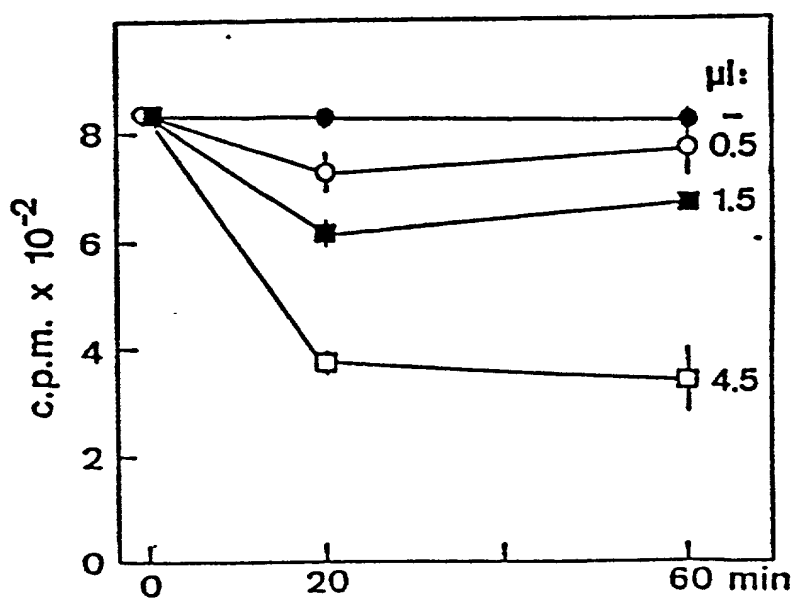
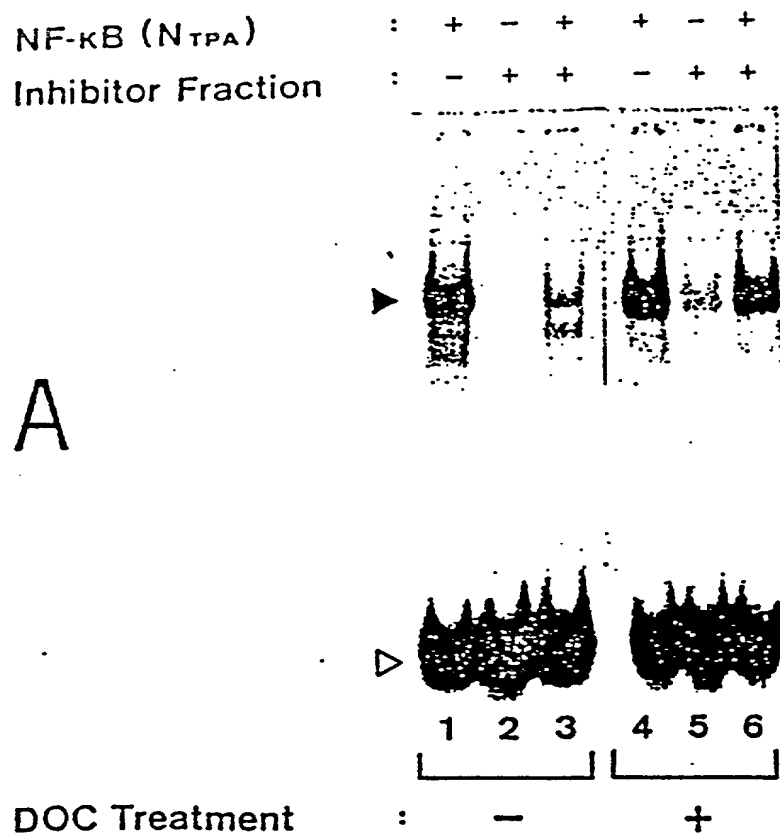
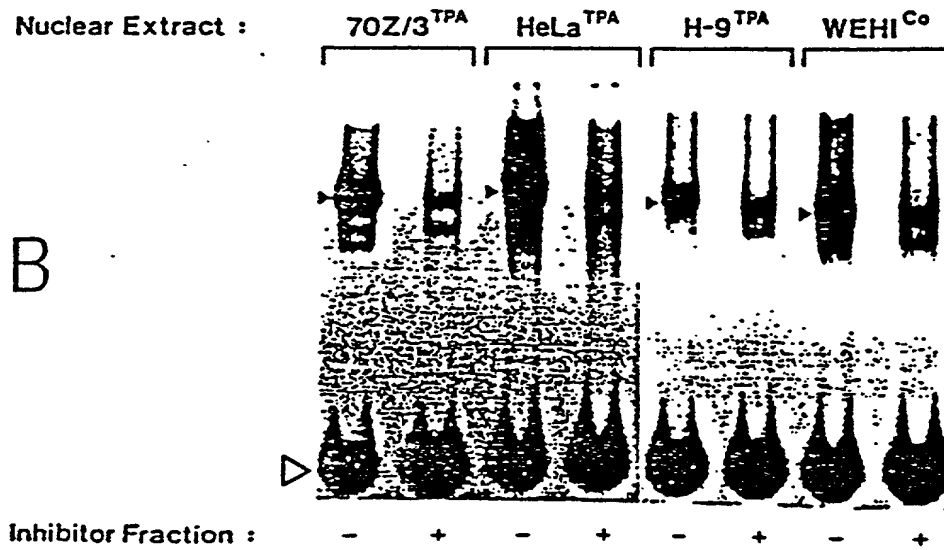
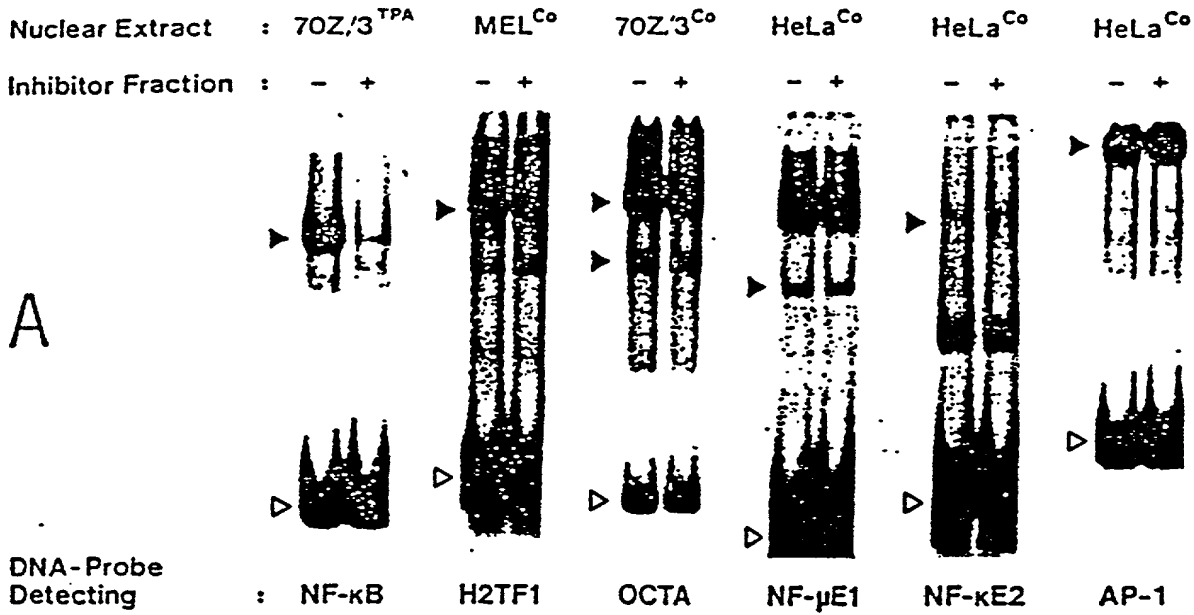
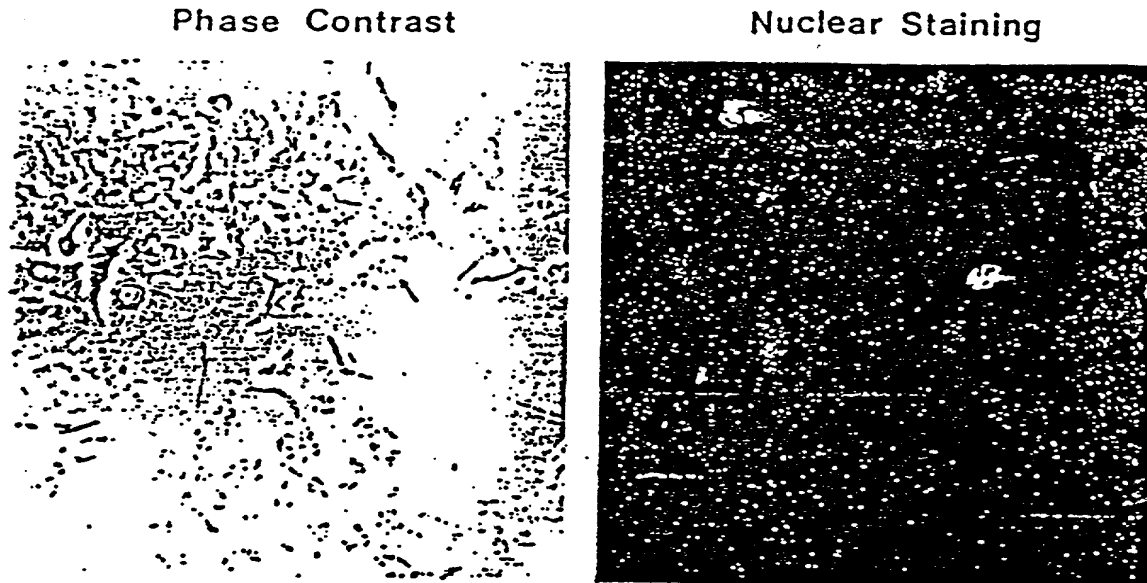


FIGURE 37



204010" 5142E00T

FIGURE 38



Enucleation : - + - + - +
 Treatment of Cells : Co TPA Co TPA Co TPA Co TPA Co TPA Co TPA



Probe : 1 2 3 4 5 6 7 8 9 10 11 12
 DOC-Treatment : - + -

204070-574FE007

A

B

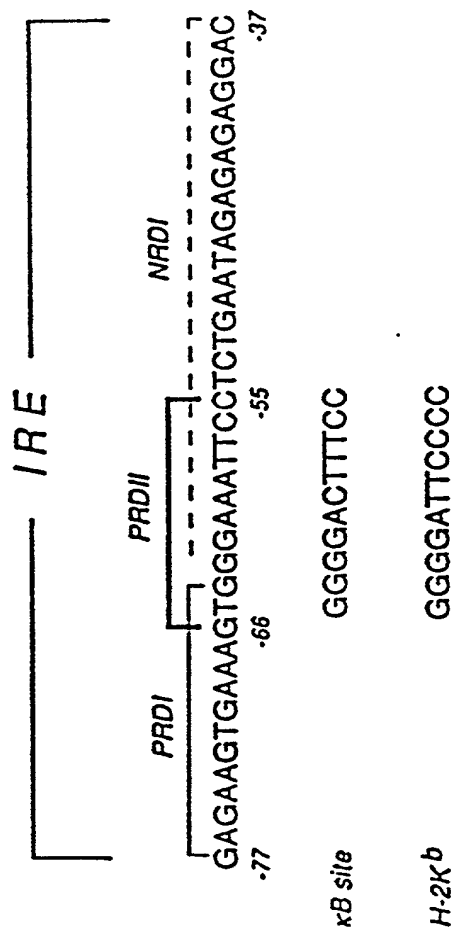


Figure 39

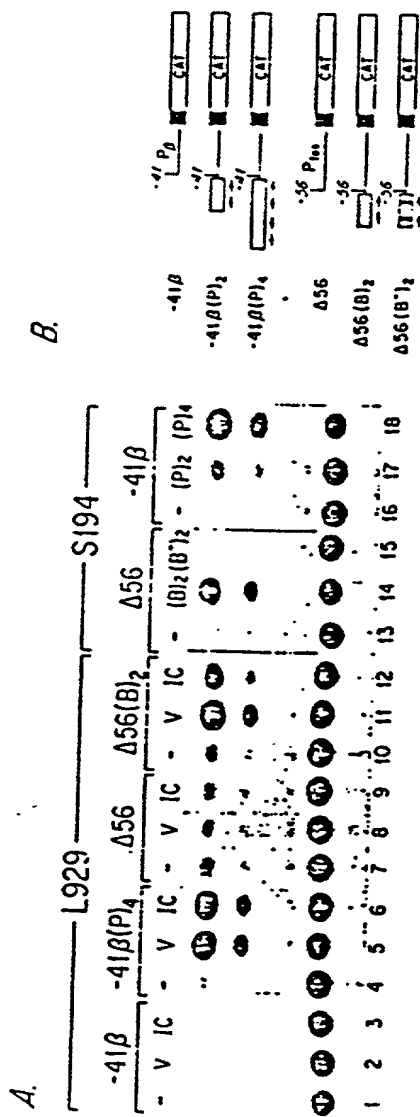


Figure 41

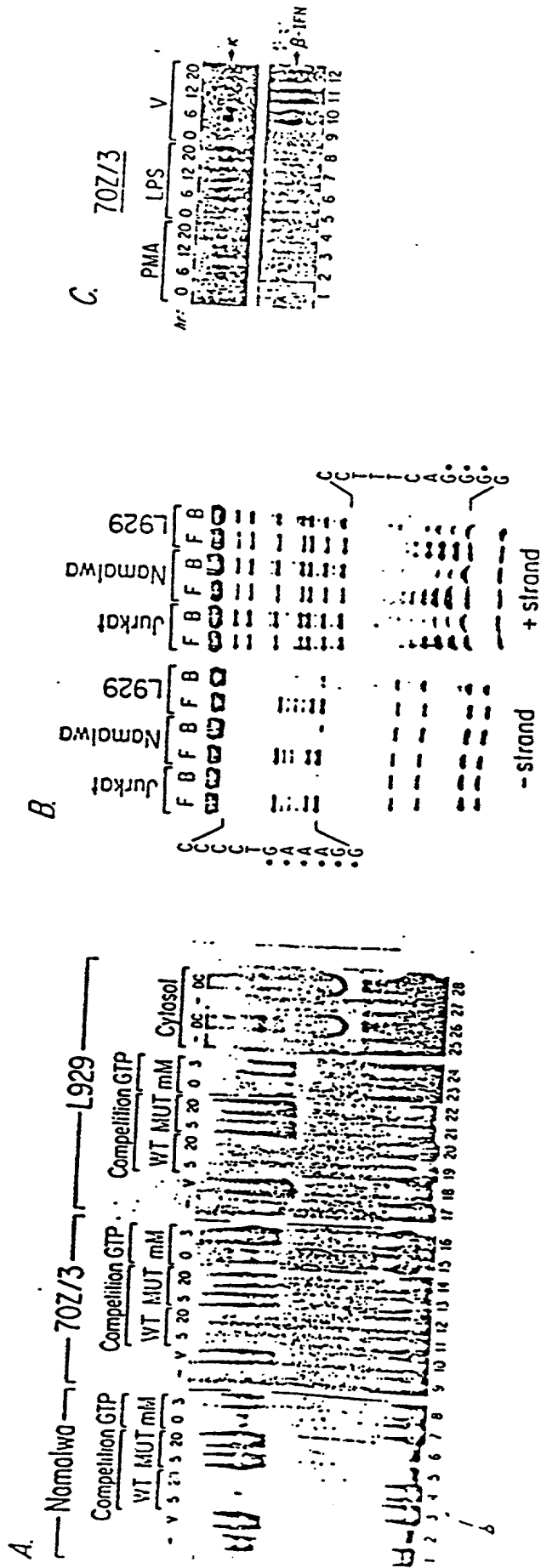


Figure 42

